Notice of Preparation and Comments



Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613 SCH# For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814 Project Title: McKinleyville Town Center Rezone Contact Person: Jacob Dunn, Associate Planner of Planning and Building Lead Agency: County of Humboldt Mailing Address: 3015 H Street Phone: 707-445-7541 City: Eureka County: Humboldt Project Location: County: Humboldt City/Nearest Community: McKinleyville Cross Streets: Railroad Drive (north); Heartwood Drive (south); Central Avenue (east); McKinleyville Avenue (west) Zip Code: 95519 <u>' 35.74 " N / 124 ° 6 ' 21.49 " W Total Acres: 134</u> Longitude/Latitude (degrees, minutes and seconds): 40 ° 56 Assessor's Parcel No.: Multiple Section: Twp.: Range: Waterways: Mad River, Mill Creek, Norton Creek, Widow White Creek Within 2 Miles: State Hwv #: 101, 200 Airports: California Redwood Coast-Humboldt County Airport Schools: Morris Elementary, McKinleyville Middle, Northern Humbo Railways: Northwestern Pacific **Document Type:** CEQA: NOP Draft EIR NEPA: NOI Other: Joint Document ☐ Supplement/Subsequent EIR Early Cons EA Final Document Other: Neg Dec (Prior SCH No.) Draft EIS ☐ Mit Neg Dec ☐ FONSI **Local Action Type:** General Plan Update Specific Plan Rezone Annexation General Plan Amendment Master Plan Prezone Redevelopment General Plan Element ☐ Planned Unit Development Use Permit Coastal Permit ☐ Community Plan Site Plan ☐ Land Division (Subdivision, etc.) ☐ Other: **Development Type:** Residential: Units 2,655 Acres Office: Sq.ft. Acres _____ Employees___ Transportation: Type Commercial:Sq.ft. 1,387,822 Mining: Mineral Acres _____ Employees_____ Power: Industrial: Sq.ft. Acres _____ Type Employees Educational: ☐ Waste Treatment: Type MGD Hazardous Waste: Type Recreational: ☐ Water Facilities: Type Other: **Project Issues Discussed in Document:** Aesthetic/Visual Fiscal ■ Recreation/Parks Vegetation ■ Flood Plain/Flooding Schools/Universities ■ Water Quality Agricultural Land Air Quality Forest Land/Fire Hazard Septic Systems ■ Water Supply/Groundwater ■ Archeological/Historical ■ Geologic/Seismic ■ Sewer Capacity ■ Wetland/Riparian ■ Biological Resources Minerals ■ Soil Erosion/Compaction/Grading Growth Inducement Coastal Zone Noise ■ Solid Waste Land Use ■ Drainage/Absorption ■ Population/Housing Balance ■ Toxic/Hazardous ■ Cumulative Effects

Present Land Use/Zoning/General Plan Designation:

☐ Economic/Jobs

116 residential units and 481,800 SF of commercial/Community Commercial (C-2) and Residential Multiple Family (R-3)

■ Traffic/Circulation

Project Description: (please use a separate page if necessary)

■ Public Services/Facilities

The McKinleyville Community Plan calls creating a unique identity for McKinleyville by developing the area know as Town Center into a viable town center that serves as a community focal point, contains a mixture of land uses, and functions as a center for social/community interaction that encourages bicycle and pedestrian travel and allows for convenient and safe automobile access. The County of Humboldt will evaluate the potential, reasonably foreseeable environmental impacts that could occur from rezoning the Town Center site to Q-Zone, a set of zone, as est of zone, as est of zone, as est of zone, as est of zone whose implementation is intended to facilitate development that achieves the Town Center community Plan vision. The Town Center site is currently zoned Community Commercial (C-2) and Residential Multiple Family (R-3). The Q-Zone would establish Mixed-Use (MU) as the underlying zoning district across the site. Existing areas developed with public facilities and a mobile home part would be consistent with the Q-Zone regulations, as these use types are permitted. A separate portion of the site is being reserved to support welfand mitigation, as several acres of the site have been delineated as welfand, whose conversion to developed uses would require mitigation. The Q-Zone regulations would also expand the range of uses allowed in the MU zone to include: winery/distillery, residential units and unit-family residential units and 1,387,822 square feet of new commercial development. The EIR will focus on evaluating the environmental impacts of this growth. The Q-Zone regulations would so modify how wellands within the Town Center iste are delineated. Rather than wetlands being defined based on the presence of one of three commonly used parameters (e.g., vegetation, soil and/or hydrology), all three parameters must be present per the Q-Zone regulations. Additional project description details are included in the attachment to his NOC.

Other:

Reviewing Agencies Checklist

	Agencies may recommend State Clearinghouse distri u have already sent your document to the agency pleas		6 6
Х	Air Resources Board		Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency		Parks & Recreation, Department of
X	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District # 1		Public Utilities Commission
	Caltrans Division of Aeronautics	X	_
			Resources Recycling and Recovery, Department of
			S.F. Bay Conservation & Development Comm.
			San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
			San Joaquin River Conservancy
			Santa Monica Mtns. Conservancy
	-		State Lands Commission
			SWRCB: Clean Water Grants
	Education, Department of		SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
Х	Fish & Game Region # 1		Tahoe Regional Planning Agency
	Food & Agriculture, Department of		Toxic Substances Control, Department of
	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		
	Il Public Review Period (to be filled in by lead agen		g Date 4.27.2024
Lead	Agency (Complete if applicable):		
Cons	sulting Firm:	Appli	cant:
Addı	ress:	Addre	ess:
City/	State/Zip:	City/S	State/Zip:
Cont	act:	Phone	×:
Phon	e:	_	
Sian	ature of Lead Agency Representative: Dunn, Jacob	_ 	Digitally signed by Dunn, Jacob Date: 3.28.2024

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Notice of Preparation

To: Interested Parties

Date: 3.28.2024

Subject: Notice of Preparation of Draft Environmental Impact Report for the McKinleyville

Town Center Rezone Project

Lead Agency: County of Humboldt

NOTICE IS HEREBY GIVEN THAT the County of Humboldt will be the Lead Agency under the California Environmental Quality Act (CEQA) and will prepare a Draft Environmental Impact Report (DEIR) for the proposed project. This NOP includes a project description and an overview of the potential impacts that will be addressed in the DEIR.

Project Title: McKinleyville Town Center Rezone

Project Applicant: County of Humboldt

Project Location: Between Heartwood Drive on the south, Railroad Drive on the north, and extending from McKinleyville Avenue to the west to the eastern edge of Pierson Park, in the unincorporated community of McKinleyville.

The project description, location map, and the potential environmental effects are included in the attached document.

The purpose of this notice is: (1) to serve as the Notice of Preparation to potential Responsible Agencies, agencies involved in funding or approving the project, and Trustee Agencies responsible for natural resources affected by the project, pursuant to Section 15082 of the CEQA Guidelines; and (2) to advise and solicit comments and suggestions regarding the preparation of the DEIR, environmental issues to be addressed in the DEIR, and any related issues, from interested parties in addition to those noted above, including interested or affected members of the public. The County of Humboldt requests that any potential Responsible or Trustee Agency responding to this notice do so in a manner consistent with CEQA Guidelines Section 15082(b).

All interested parties that have submitted their names and mailing addresses to the County will be notified as part of the project CEQA review process. If you wish to be placed on the mailing list or have any questions or need additional information, please contact the person identified below. A copy of the NOP is posted on the County's website at: https://humboldtgov.org/2564/McKinleyville-Town-Center-Master-Plan, and on file at the County Planning and Building Department office, located at the address provided below.

Scoping Meeting:

Date: 4.16.2024 Time: 6pm – 8pm

Location: McKinleyville Family Resource Center

1615 Heartwood Drive McKinleyville, CA 95519

Via telephonic/electronic meeting. Link will be posted on the County website at: https://humboldtgov.org/2564/McKinleyville-Town-Center-Master-Plan no later than time and date of the meeting.

30-Day NOP Review Period: In accordance with CEQA, should your agency have any comments, it is requested to provide a written response to this NOP within the 30-day NOP review period between 3.28.2024 and 4.26.2024. Written comments must be received at the address below no later than 5:00 p.m. on 4.26.2024.

Please indicate a contact person in your response and send it to the following contact:

Jacob Dunn
Associate Planner of Planning and Building
County of Humboldt
3015 H Street
Eureka, CA 95501

3.28.24

Date

Jacob Dunn, Associate Planner of Planning and Building

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McKinleyville Town Center Rezone Notice of Preparation

Project Overview

The McKinleyville Town Center Rezone Project (proposed project) is intended to establish a unique identity for McKinleyville by promoting the Town Center area of McKinleyville as a community focal point for social/community interaction. Guidance for developing the Town Center site would be established by rezoning the Town Center area to a Mixed Use base zoning and adopting a "Q-Zone" overlay zoning district. The Q-Zone will apply specific regulations to the Town Center site. The Q-Zone will support a mix of commercial, civic, and residential uses while emphasizing bicycle and pedestrian connectivity, public gathering spaces, open space, and wetland preservation. One of the primary goals for the Town Center to promote mixed land uses that are supported by pedestrian, bicycle, transit improvements, as well as vehicular circulation improvements that enhance connectivity in the area. The Q-Zone includes form-based building design standards.

Setting/Project Location

The approximately 134-acre Town Center site is located in the unincorporated community of McKinleyville in Humboldt County, California. It is generally situated between Heartwood Drive on the south and Railroad Drive on the north, and extends from McKinleyville Avenue on the west to the eastern end of Pierson Park. The project site is primarily accessed via Central Avenue, which provides access north and southbound through McKinleyville. The Central Avenue corridor is developed with and zoned for commercial uses. The project site and its relationship to the surrounding McKinleyville community is illustrated in Figure 1, Location Map.

Existing development within the site includes 116 residential units and about 481,800 square feet of commercial use. Several acres of the site have been defined as wetland.

Project Description

The McKinleyville Community Plan calls for creating a unique identity for McKinleyville by developing a viable town center that serves as a community focal point and which contains a mixture of land uses with a center for social/community interaction that encourages bicycle and pedestrian travel and allows for convenient and safe automobile access. The County of Humboldt ("County") will evaluate the potential, reasonably foreseeable environmental impacts that could occur based on developing the site consistent with the proposed Q-Zone development standards.

In addition to building and other standards, the Q-Zone standards include language that would change how wetlands are defined. Wetlands are typically delineated as features based on the following parameters:

- Vegetation: The dominant vegetation must consist of species that are typically adapted to grow, effectively compete, reproduce, and/or persist in anaerobic (low/no oxygen) soil conditions.
- Soil: Soils present are classified as hydric, or they possess characteristics that are associated with reducing soil conditions (saturated soils).
- Hydrology: The area is inundated either permanently or periodically, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

Historically in McKinleyville, only one of these parameters would need to be exhibited to define an area as wetland. The Q-Zone standards would modify this approach by requiring that all three parameters be met to define an area as wetland.

The Town Center site is currently zoned a combination of Community Commercial (C-2) and Residential Multiple Family (R-3), with portions zoned with a wetland overlay. The Town Center would apply Mixed-Use (MU) as the new underlying zoning district for the entire site. The Q zone allows modifications to the underlying uses to address unique circumstances associated with the site. Among other uses, public facilities, higher density residential uses and resource sites to be preserved/maintained are permitted. A Q zone will allow uses in the Town Center that would be found under the designation for Public Facility (PF1) to reflect existing public facility uses. The Q zone would also allow uses found in the designation for Residential Multiple Family (R-3) to reflect an existing residential uses. A portion of the area to the west would be designated with a combining zone for Streamside Management Areas and Wetlands based on its planned function as a wetland mitigation area. Figure 2, Proposed Town Center Zoning Map, shows these respective areas of the site.

The Town Center is drafted and will be evaluated in the EIR to allow subsequent development to occur without further environmental review except in circumstances which are not foreseen in the ordinance or in the environmental review. This includes a known senior living campus project titled Life Plan Humboldt that will include 144 one and two bedroom units, a 22,000 square foot common area, 12 Assisted living suites, 12 memory care studios and 60 affordable units on the south side of Hiller Avenue.

The Q-Zone regulations would also expand the range of uses allowed in the MU zone to include winery/distillery, restaurants, multi-family residential (minimum density 16 units per acre), churches, and private and public schools.

Project Objectives

Project objectives for developing the Town Center ordinance are as follows:

- 1. Establish a unique identity for McKinleyville through developing a viable town center, serving as a community focal point and providing a center for social/community interaction.
- 2. Develop an area of mixed land uses which encourages bicycle and pedestrian travel, yet allows for convenient and safe automobile access.
- 3. Permit mixed-use categories of zoning, including higher density housing in concert with retail commercial uses and shopfronts, and an abundance and variety of open spaces.
- 4. Offer opportunities for developing a full range of commercial uses including a grocery store, shops, department store, hardware home supply, movie complex, laundromat, and restaurants; office space and medical and dental clinic; town green for athletic and civic events, civic buildings and a library; high density residential and mixed use residential above commercial uses; farmers market; child care facilities; and art galleries.
- 5. Focus on community scale needs without drive-thru restaurants and no large "big-box" department stores, with store design that avoids the look of giant retail department stores.
- 6. Identify design alternatives for Central Avenue which ease pedestrian and bicycle traffic, including traffic calming measures.
- 7. Promote safe, accessible and human scale residential and commercial areas where people of all ages can work and play.
- 8. Promote development of pedestrian-oriented neighborhoods and commercial areas.
- 9. Develop appropriate design review standards consistent and compatible with the overall principles, objectives and policies of the entire Humboldt County General Plan.
- 10. Include mixed-use categories of zoning, including higher density housing above retail commercial uses and shopfronts designed to include an abundance and variety of open spaces, such as urban parks, courtyards and gardens, with a connected system of pedestrian walkways, alleys and streets.
- 11. Design intersections and streets within the Town Center to facilitate pedestrian movement, provide bicycle connections to commercial areas and transit stops, and provide transit stops with shelter for pedestrians and provisions for secure bicycle storage.
- 12. Protect natural land forms by minimizing alteration caused by cutting, filling, grading or clearing.
- 13. Screen or soften the visual impact of new development through the use of landscaping and promote use of species common to the area and known fire resistant plants.

New Development Capacity

The proposed Q-Zone regulations would modify the type and amount of new development that could occur within the project site relative to existing zoning. New development capacity for the 113-acre area shown as Mixed Use in Figure 2 is summarized in Table 1, Expected New Town Center Development Capacity. No new development capacity is assumed for areas of the site shown in Figure 2 as Public Facility, Residential (R-3) or Wetlands, which total a combined approximately

31 acres of the 134-acre site. Under existing residential and commercial zoning regulations that apply to the site, new development capacity is assumed to be 2,195 new residential units and 1,372,000 square feet of new commercial development. Consequently, the proposed project would result in approximately 640 more residential units and 109,771 square feet of commercial development relative to existing zoning.

It is possible that some of the existing residential and/or commercial uses within the area planned for mixed use development could be demolished as part of one or more future individual development projects that implement the Q-Zone. That determination will be made at the time individual development project applications are submitted to the County.

Table 1 Expected New Mixed Use Town Center Development Capacity

Land Use	Acreage	Multi-Family Residential Units	Commercial Building Square Footage
Mixed Use	106	2,655 (25 units/acre)	1,387,822

SOURCE: County of Humboldt 2024

EIR Approach and Probable Environmental Effects

The EIR will focus on evaluating the reasonably foreseeable potential impacts of developing the project site with the uses shown in Table 1. The environmental resource implications of changing the wetland definition approach from one to three parameters will also be addressed. Potential environmental effects of the project and the scope of analysis that will be undertaken to assess each are briefly discussed below.

Aesthetics and Visual Resources

The proposed Q-Zone regulations require that lighting only be used for a clear public safety purpose and shall be directed at the area which requires illumination; otherwise, lighting is not allowed. The project also proposes a decrease in the maximum building height allowed within the MU zone; the proposed zoning would allow for a building height of four stories whereas the original zoning allowed 75 feet (which is taller than a four-story building).

U.S. Highway 101 is located approximately 0.3 miles west of the project site (specifically, the wetland designated area and not the area planned for future development) and is considered an eligible state-designated scenic highway according to Caltrans. The Town Center site is not visible from Highway 101 due to existing development and the elevation of Highway 101 is lower than the property between the site and Highway 101.

This section of the EIR will address the potential for new development to substantially impair the visible character of project area scenic resources and include a discussion of proximity to scenic roadways and scenic vistas, existing lighting standards, and recommendations for mitigating any potentially significant impacts.

Agriculture and Forestry Resources

None of project site is designed for agricultural use and none of the site is under Williamson Act contract. None of the project site is zoned Timberland. The County has partially mapped the project area as containing soils designated as "Prime AG Soil – Ar5," "Prime AG Soil – Ar6," and "Prime AG Soil – Hk4" (Humboldt County Web GIS 2024).

According to the 2017 County general plan EIR:

"Humboldt County does not participate in the statewide Farmland Mapping and Monitoring Program, and is therefore unable to analyze the impacts to these lands. Humboldt County is currently in the process of updating the soils maps so that ultimately the County could qualify to participate, but as of the preparation of this DEIR, the soils survey is not complete. However, the County addresses the loss of farmlands, both prime and non-prime, as described in the following sections and provides mitigation measures to address this loss as a result of the General Plan Update." (Humboldt County 2017, page 3.2-19)

As of February 2024, the Farmland Mapping and Monitoring Program of the California Department of Conservation had not yet mapped farmland in Humboldt County. The EIR will utilize the County general plan and general plan EIR policies and mitigations as the basis of determining the significance of converting prime agricultural soils to non-agricultural use.

Air Quality

The project site is located in the North Coast Air Basin (air basin). The North Coast Unified Air Quality Management District (air district) has jurisdictional authority within the air basin. The proposed project would generate criteria air pollutant emissions during its construction and operation. This section of the EIR will address whether the project would conflict with or obstruct implementation of the applicable air quality standards, result in a cumulatively considerable net increase of any criteria pollutant, and/or create air pollutant concentrations that could create risk for public health. The potential for the proposed project to generate criteria air pollutants and toxic air contaminants with potential to cause significant impacts will be the focus of this analysis. Air emissions will be modeled and compared to thresholds of significance.

Biological Resources

Based on a preliminary review of aerial photographs, the project site may contain areas of annual grassland, wetlands, and scattered spruce and fir trees.

The preliminary results of the McKinleyville Town Center Wetlands Mapping Project (GHD 2023) show approximately 5.4 acres of wetlands delineated within the project boundary. These wetlands likely fall under the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and/or the California Department of Fish and Wildlife.

As noted previously, wetlands are typically delineated as features exhibiting one or more of with the following key parameters:

- Vegetation: The dominant vegetation must consist of species that are typically adapted to grow, effectively compete, reproduce, and/or persist in anaerobic (low/no oxygen) soil conditions.
- Soil: Soils present are classified as hydric, or they possess characteristics that are associated with reducing soil conditions (saturated soils).
- Hydrology: The area is inundated either permanently or periodically, or the soil is saturated to
 the surface at some time during the growing season of the prevalent vegetation.

Some jurisdictions, such as the California Coastal Commission, use a "one-parameter" approach to defining wetlands, meaning only one of the above three criteria would define the presence of wetlands. Other jurisdictions, such as the U.S. Army Corps of Engineers, require all three criteria ("three-parameter") to be present to define the extent of wetlands. In McKinleyville, wetlands have been previously defined using the one-parameter definition. The Q-Zone regulations would modify this prior practice by requiring use of the three-parameter approach. The results of the *McKinleyville Town Center Wetlands Mapping Project* (GHD 2023) include both the extents of one-parameter and three-parameter wetlands within the project boundary and the difference in extents will be analyzed in the biological resources section of the EIR, as will requirements for wetland mitigation as described in the Q-Zone regulations.

The potential for habitat for special-status species in the area to be present on the site and recommend mitigation measures for the protection of biological resources will be addressed. If suitable habitat is identified, recommendations may also include the need for additional specific or protocol-level surveys to be conducted when development is proposed.

Cultural Resources

The project site includes four structures that are considered by the County to be historic site and cultural resources. The project site is also located less than one mile east of the ocean and less than one-half mile south of Widow White Creek, which could influence the potential that cultural resources are present. The potential for the project to impact historic and unique archaeological resources will be assessed and mitigation measures proposed as necessary.

Energy

The project will increase demand for energy resources, primarily in the form of electricity and transportation fuels. Projected energy demand will be quantified based on the CalEEMod results. Future development within the site will be required to comply with uniformly applied regulations for energy efficiency and conservation. If air quality and/or GHG impacts are found to be significant, associated mitigations could include actions that also reduce energy demand. Applicable regulations will be discussed to identify how energy demand will be moderated, as will any air quality and/or GHG mitigation measures that reduce energy demand.

The impact evaluation will assess whether the energy needs of the project would be wasteful, inefficient, or unnecessary, or if it would conflict with a state or local plan for renewable energy or energy efficiency. This evaluation will be qualitative in that there are no quantified thresholds of significance against which project demand can be compared.

Geology and Soils

Geologic and soils resources and potential hazards/development constraints at the site will be reviewed using existing information. Future individual development projects will be required to prepare site specific geotechnical reports to identify these issues for their specific sites. Existing state and local uniformly applied development standards that serve to reduce related hazards and impacts will be reviewed based on their function to reduce the significance of potential impacts.

Greenhouse Gas Emissions

The proposed project will be a source of GHG emissions whose impact must be evaluated. The predominant sources of emissions are likely to be vehicle travel, with electricity and potentially natural gas use also being notable sources. The draft *Humbolt County Climate Action* plan will be used to streamline the review of GHG emissions impacts if the plan is adopted prior to the draft EIR being released for public review. If not, the plan will be used as reference, but with guidance for evaluating GHG impact significance provided by the Bay Area Air Quality Management District in its *CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans* used as the basis for determining impact significance. Projected GHG emissions will be quantified using CalEEMod. Emissions reductions accruing to legislative actions and specific actions identified in the Q-Zone regulations will be evaluated. Mitigation measures will be identified as needed.

Hazards and Hazardous Materials

The types of new development anticipated in Town Center are not anticipated to be notable sources of hazardous materials risks. The existence of known hazardous materials conditions within the site will be evaluated based on review of hazardous materials conditions databases. Uniformly applied state and County regulations designed to reduce the risk of hazardous materials release will be identified as serving the function of mitigating potential environmental impacts.

Hydrology and Water Quality

Conversion of vacant areas of the site to urban development would create new impervious surfaces that change existing drainage patterns. The site is not located within a flood hazard zone.

The proposed project is not likely to be the source of unique impacts on water quality. Nevertheless, potential sources of water quality degradation will be identified. Its potential water quality effects will be evaluated in light of uniform regulations promulgated by the County to implement State Water Quality Control Board mandates for protecting ground and surface water quality that function to reduce the significance of potential water quality impacts.

The McKinleyville Community Services District provide municipal water supply in McKinleyville primarily from surface water sources. The McKinleyville Community Services District will be consulted about water supply available and projected demand from the project. The McKinleyville Community Services District FINAL 2020 Urban Water Management Plan will be reviewed as a basis for determining the adequacy of existing and projected water supply availability to meet project demand. Potential impacts on groundwater supply conditions are expected to be nominal given that surface water supply would be utilized to serve the project.

Noise

This section will address the noise sources from the proposed project and whether noise level increases could adversely affect noise sensitive receptors. The proposed uses are not expected to be sources of significant point source noise generation. Traffic noise effects will be evaluated based on changes in traffic volumes that would be generated by new development. Analysis of noise impacts will be conducted in the context of related County general plan policies and analysis conducted in the general plan EIR.

Public Services and Recreation

This section of the EIR will assess the need for new public facilities (police, fire schools, parks) and address, to the extent possible, whether constructing and operating such facilities could result in significant impacts. Various agencies will be consulted including, but not limited to, Humboldt County Sheriff's Office, Humboldt County Office of Emergency Services, Arcata Fire Protection District, Humboldt County Parks and Trails, Pacific Union School District, and Northern Humboldt Union High School District.

Solid Waste

This section will address the potential impacts of physical changes associated with expanded solid waste facilities/local landfills should the proposed project trigger the need for such expansions. The Humboldt Waste Management Authority, Recology Humboldt County, and the California Department of Resources Recycling and Recovery (CalRecycle) will be primary sources of information to assess potential solid waste impacts.

Transportation

The proposed project has the potential to result in an increase in vehicle miles travelled (VMT). W-Trans will prepare a traffic study to assess VMT impacts for reporting in the EIR. For County informational purposes, W-Trans will also address the non-CEQA issues of project effects on traffic operations and parking. Proposed modifications to adjacent roadways as identified in the Q-Zone regulations will be reviewed for their feasibility and effect on traffic operations and bicycle and pedestrian safety and connectivity, as will the proposed road network identified in the Q-Zone regulations.

Tribal Cultural Resources

The County's SB 18 and AB 52 tribal consultation process will be reviewed. If consultation is requested and conducted, the results will be identified along with conclusions about whether the proposed project cause an adverse change on the significance of a tribal cultural resource.

Water and Sewer Systems

The McKinleyville Community Services District purchases wholesale treated drinking water from Humboldt Bay Municipal Water District, the regional supplier. Humboldt Bay Municipal Water District operates the Ruth Reservoir and approximately 11 million gallons of water per day from this reservoir is delivered to municipal/district customers. Of this total, a peak flow rate of 2.6 million gallons per day is committed to serve the McKinleyville Community Services District customers. No groundwater is pumped. The McKinleyville Community Services District also provides sewer services to the area and operates its own wastewater management facility.

The EIR will address the capability of the water and sewer facilities of the McKinleyville Community Services District to serve the projected new development whether future development within the project site requires the construction of new or expansion of existing facilities to adequately support the development.

Effects Found Not to Be Significant

This section of the EIR will include brief analysis of environmental effects whose impacts are determined to be less than significant based on review of readily-available information. At this time, it is anticipated that mineral resources impacts and wildfire impacts will be less than significant. One or more environmental topics discussed above may be included in this section based on the outcome of their respective impact analyses. Data sufficient to support a determination of less than significant impact will be provided.

Cumulative Impacts

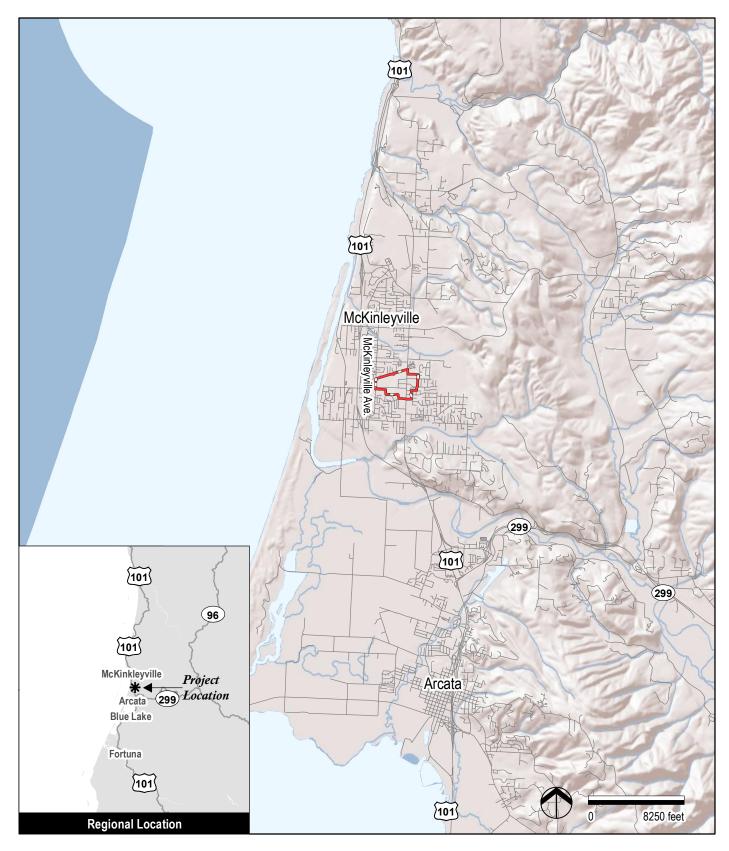
The cumulative effects of buildout of the Town Center, combined with other relevant plans and programs, will be analyzed in this section of the EIR.

Growth Inducement

In accordance with CEQA Guidelines section 15126.2(d) the EIR will include a discussion of the growth-inducing impacts of the project.

Alternatives

In accordance with CEQA Guidelines section 15126.6 the EIR will include analysis of a reasonable range of project alternatives, and/or to the project location, which could feasibly attain most of the basic project objectives, but would avoid or substantially lessen any of the significant project effects. An evaluation of the comparative merits of the alternatives will be presented.



Source: ESRI 2024



Project Boundary

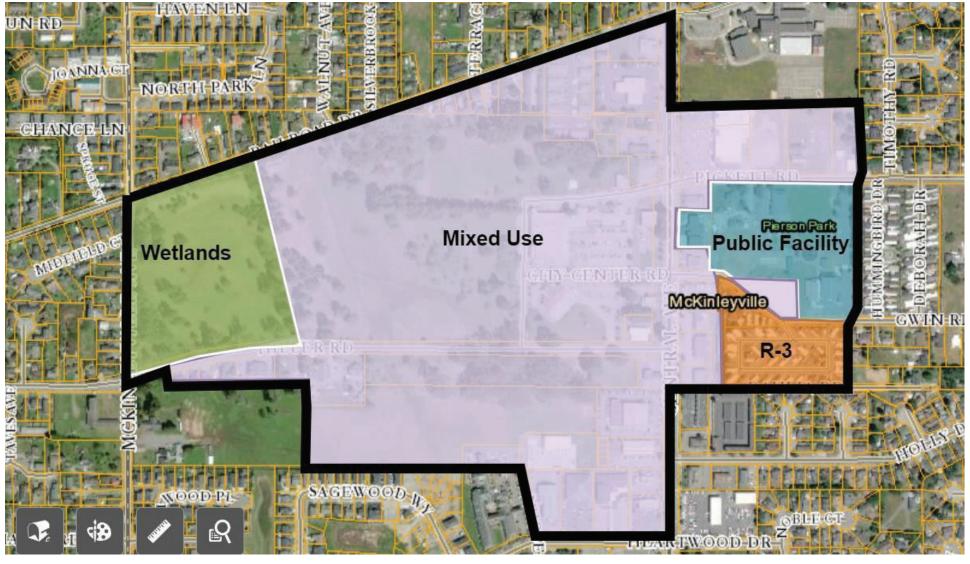
Figure 1 Location Map







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Project Boundary

Source: Humboldt County 2023

Figure 2







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Ron Sissem Dunn, Jacob

MA 90:02:8 4202 ,21 linqA ,ysbnoM FW: McKinleyville Town Center EIR Scoping Comments

gnq. 100 agsmi

Attachments: Date: :toə[du2 :oT From:



Jacop Dunn

Phone: 707-267-9390 | Fax: 707-445-7446 3015 H Street | Eureka, CA 95501 Planning and Building Department



Please consider the environment before printing this e-mail

To: Dunn, lacob <jdunn@co.humboldt.ca.us> Sent: Monday, April 8, 2024 1:00 PM From: Colin Fiske <colin.fiske@gmail.com>

Subject: McKinleyville Town Center EIR Scoping Comments

Caution: This email was sent from an EXTERNAL source. Please take care when

clicking links or opening attachments.

Center Rezone Project EIR: Please accept the following scoping comments from CRTP on the McKinleyville Town Hi Jacob,

- VMT per capita. appropriate metric for the transportation impacts of residential development is impacts for commercial development may be evaluated in term of total VMT, the vehicle miles traveled (VMT)." We remind the county that, while transportation 1. The NOP states that the project "has the potential to result in an increase in
- 3. The NOP states that the "non-CEQA issues of project effects on traffic operations not the countywide average, which is heavily skewed by remote rural areas. compare project VMT to the existing VMT in the developed Humboldt Bay region -2. We ask that the county, in assessing the significance of transportation impacts,
- reference. can find these comments copied below, and we incorporate them here by to the McKinleyville Municipal Advisory Committee on September 29, 2023. You our cautions about the limitations of traffic studies, which we submitted via email in the NOP. However, since these issues are mentioned in the NOP, we reiterate environmental documentation; in fact, we question the mention of these analyses issues. They should therefore be excluded from the EIR and any other related and parking" will also be assessed. We agree that these are clearly non-CEQA
- parking which as mentioned are all non-CEQA issues transportation safety 4. In contrast to the issues of traffic operations, congestion/level of service (LOS) and

issues are cognizable under CEQA. In fact, safety hazards due to design features and incompatible uses must be considered under CEQA. Therefore, to the extent that the traffic study mentioned in the NOP assesses "bicycle and pedestrian safety and connectivity," this part of the assessment could in fact be relevant to the project's transportation impacts.

Thanks, Colin

Email submitted to the McKinleyville Municipal Advisory Committee on 9/29/2023 and now incorporated into these scoping comments:

McKinleyville Municipal Advisory Committee Members,

I have seen a lot of traffic studies, and it strikes me that some of the expectations for the promised study of Central Avenue are probably unrealistic. You won't be seeing that study for a while yet, but I wanted to send this email to clarify a few important points and provide some context for thinking about the information you'll eventually receive. The main point is this: the information provided by a traffic study will be extremely limited in scope and has no guarantee of accuracy.

- 1. The only question a traffic study will attempt to answer is where and how quickly traffic will flow. This may be obvious, but it's critically important. A traffic study will not tell you anything about how proposed changes to Central Ave might change the number of people who walk or bike on the street, the likelihood of those people being hit by a car, or the effect on local businesses. I believe and hope that all of you prioritize safety and successful place-making over the possibility of traffic slow-downs. And if you do, you already have abundant evidence that a "road diet" would produce greater safety, benefit businesses, and create a more pleasant place to walk or bike (I could hyperlink an example for that last point, but I think it's pretty self-evident). The traffic study won't give you any additional information on those topics.
- 2. Most traffic models are not very good at predicting behavioral responses to changes in vehicular capacity. Traffic engineers have been studying the effect of road capacity increases on "induced [increased] travel" and predicting changes in travel times for decades, but standard traffic models still dramatically underestimate induced driving and dramatically overestimate travel time savings from increased capacity. The inverse of this, so-called "traffic evaporation" in the case of reduced capacity (e.g., a road diet), is even less well reflected in standard traffic studies, and consequently models of these cases are even less reliable. Put another way, "people react to a change in road conditions in much more complex ways than has traditionally been assumed in traffic models." (Here's a more recent

- study that confirms this ongoing model bias.) The lesson is clear: it is quite difficult to predict how people (and therefore traffic) will react to something like a road diet, and traffic models are highly likely to overestimate the extent of traffic impacts.
- 3. Even using standard traffic models and assuming conservatively that a road diet will cause delays, these impacts pale in comparison to the benefits.

 Unfortunately, apples-to-apples comparisons of costs and benefits are not often done, and will certainly not be part of the traffic study results which are eventually presented to you. But when such analysis are done, the results are clear.
- 4. Concerns about diversion can be easily addressed. Most <u>real-world case</u> studies show extremely limited traffic diversion to alternate routes following a road diet. However, as noted, traffic models are notoriously bad at predicting the kinds of complex behavior changes related to diversion, so it's possible that the Central Ave traffic study will predict some (likely imaginary) diversion. If this is a concern, there is a simple solution: traffic calming on the only real alternate route (McKinleyville Ave) will make it unappealing as an alternate route for any driver concerned only about travel time.
- 5. Traffic delay and congestion are no longer considered impacts under CEQA. The county has requested a traffic study in conjunction with the development of the Town Center Environmental Impact Report. However, even if the study predicts traffic congestion, this will not be considered an impact in the EIR, and no mitigation will be required. (You can read about 2013's SB 743 for more information on this.) You (and the Board of Supervisors) can consider the results of a traffic study separately from CEQA, but under CEQA the "environmentally preferable alternative" will be the one that reduces vehicle miles traveled, not the one that reduces travel times.

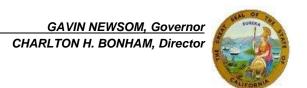
I encourage you to review the hyperlinked sources, so you can see that I'm not making this stuff up.

Thanks, Colin

--

Colin Fiske (he/him)
Executive Director
Coalition for Responsible Transportation Priorities
www.transportationpriorities.org





April 26, 2024

Jacob Dunn
Associate Planner
Humboldt County Planning and Building Department
3015 H Street
Eureka, CA 95501
jdunn@co.humboldt.ca.us

SUBJECT: MCKINLEYVILLE TOWN CENTER REZONE (STATE CLEARINGHOUSE # 2024031111)

Dear Jacob Dunn:

On March 28, 2024, the California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) from the Humboldt County Planning and Building Department (County; Lead Agency) for the McKinleyville Town Center Rezone (Project). CDFW appreciates the opportunity to provide feedback and understands the Lead Agency will accept comments through April 26, 2024.

As the Trustee Agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary to sustain their populations (Fish & G. Code, §§ 1801 & 1802). As a Responsible Agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code that conserve the State's fish and wildlife public trust resources. CDFW offers the following comments and recommendations in our role as Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA; Pub. Resources Code, §21000 et seq.). These comments are intended to minimize Project impacts on public trust resources.

Project Description

The Project is located in the unincorporated community of McKinleyville in Humboldt County, California. The 134-acre Project site includes existing residential and commercial development, concentrated primarily along Central Avenue, as well as more extensive undeveloped lands to the west, including several acres of wetland. The McKinleyville Town Center is intended to serve as a community focal point supporting social interaction and a mixture of land uses.

The Project will provide guidance for developing the Town Center site by rezoning the area to a Mixed Use (MU) base zoning and adopting a Q-Zone overlay zoning district. The Q-Zone will expand the range of uses allowed in the underlying zone to support a mix of commercial, office, civic, and high-density residential uses, as well as multi-modal connectivity, public gathering, and open space and wetland preservation. In addition to establishing development standards, Q-Zone regulations will also modify how wetlands are defined in the Town Center site. The McKinleyville Community Plan currently defines wetlands as areas satisfying at least one of three criteria (hydrology, soil, or vegetation); the new definition would require all three wetland parameters to be present.

Biological Significance

The Project site contains functional wildlife habitat in an urban landscape, offering refuge, foraging opportunities, and breeding habitat to a variety of native wildlife. Extensive wetlands also provide ecosystem services, such as groundwater recharge and sediment filtration. The site's wetlands, grassland, and scattered trees may support several special status species, including western bumble bee (Bombus occidentalis; state candidate endangered), northern red-legged frog (Rana aurora; CDFW Species of Special Concern [SSC]) and Siskiyou checkerbloom (Sidalcea malviflora ssp. patula; California Rare Plant Rank [CRPR] 1B.2), among others. In addition to wetlands, the Project site may also contain Sensitive Natural Communities (SNCs).

Comments and Recommendations

CDFW would like to offer the following comments and recommendations on this Project in our role as a Trustee and Responsible Agency pursuant to CEQA (Pub. Resources Code, §21000 et seq.).

Biological Surveys

A thorough biological assessment of sensitive wildlife, plants, and habitats should be conducted prior to circulation of the DEIR to adequately disclose direct, indirect, and cumulative impacts and identify feasible mitigation measures. Given historical occurrences of western bumble bee in McKinleyville (CDFW 2024) and the presence of suitable foraging and nesting habitat in the Town Center site, CDFW recommends conducting several appropriately timed protocol-level surveys for special status bumble bees. Rare plants and Sensitive Natural Communities should be assessed following CDFW's March 2018 *Protocols*

for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.

Wetland Mitigation

Although CDFW understands the impetus behind changing the definition of wetlands within the Town Center site, it cautions against adopting a set of measures that would collectively undermine wetland protections in McKinleyville. Changing the definition of wetlands to include only three-parameter features could reduce development constraints but may inadvertently discount valuable habitat. Without well-designed, enforceable mitigation and long-term plans for the maintenance and preservation of these areas, the Project risks degradation and loss of wetland habitat values.

According to a compilation of wetland delineations, the Project site contains approximately 5.4 acres of three-parameter wetlands and 0.6 acres of one-parameter wetlands, some of which may qualify as SNCs. Although a portion of the property is intended for wetland mitigation and conservation, development of the Town Center site will inevitably result in wetland fill. The DEIR should disclose the whole of the action for public review (CEQA § 15378(a)), quantifying the nature and extent of Project-related impacts and identifying feasible mitigation measures. CDFW encourages the County to develop a concrete framework for wetland mitigation as part of the environmental review process rather than deferring to the permitting phase (CEQA § 1526.4(a)(1)(B)). A draft Mitigation and Monitoring Plan should be provided, specifying performance standards, and identifying the range of actions that may be taken to achieve those objectives.

Although the County's commitment to no net loss of wetlands is admirable, the proposed mitigation ratio of 1.5:1 may not be sufficient to account for temporal loss of wetland function and the inevitable underperformance or failure of mitigation projects. For these reasons, CDFW typically recommends a ratio of 3:1 or greater. To obtain the greatest ecological benefit, CDFW encourages the County to consider offsite mitigation in addition to the wetland conservation area. By expanding or enhancing wetland habitat in functional ecosystems, the Project could achieve greater ecological lift than it would by consolidating and protecting wetland remnants onsite. This would be particularly true for degraded land adjacent to contiguous riparian areas, such as Widow White Creek.

For wetlands retained or relocated onsite, CDFW recommends adopting clear standards to protect habitat values and ecosystem functions. The draft zoning

regulations (dated March 28, 2024) include several provisions, including measures to minimize light pollution, prevent stormwater discharge, and preserve natural buffers. CDFW supports the idea of requiring permanent conservation easements and long-term maintenance plans to address invasive species, trespass, and other threats associated with adjacent land uses. Without such measures, areas set aside for conservation and mitigation will degrade in function and value. CDFW also encourages the County to specify adequate wetland buffers, which are an effective means of maintaining habitat connectivity, attenuating disturbance, minimizing encroachment, and protecting water quality. Well-defined buffers are particularly relevant considering the proposal to omit one-parameter wetlands from consideration. Although some of these features are isolated or provide little habitat value, others (e.g., willow thickets) abut contiguous three-parameter wetlands, extending valuable wildlife habitat and reducing edge effects. Sufficient wetland buffers would encompass these features and preserve their function.

Stormwater Management

The conversion of forests, grassland, and other natural areas to impervious surface tends to intensify stormwater runoff and increase non-point source pollution. The DEIR should thoroughly evaluate the potential direct, indirect, and cumulative impacts of increased stormwater runoff and explore feasible mitigation measures to protect adjacent wetlands. CDFW recommends developing a comprehensive stormwater management plan incorporating low-impact development standards that rely primarily on bioretention rather than underground facilities or basins. Vegetated bioswales and other passive forms of treatment retain some of the benefits associated with wetlands, particularly when landscaped with locally appropriate native plants.

Landscaping and Open Areas

The draft zoning regulations include standards for establishing and maintaining landscaped areas, including a provision (5.4.4) that planting palettes incorporate drought resistant species native to coastal northern California or non-invasive species adapted to the local climate. CDFW is supportive of this concept and therefore recommends revisiting the permitted plant list (Exhibit A), which currently conflicts with this stated goal; most of the approved species are non-native ornamentals, and some (e.g., Leptospermum, Maytenus boaria) are considered invasive. Locally appropriate native species should be prioritized over ornamentals. Native trees, shrubs, and ground covers will provide greater

habitat benefits, partially offsetting the loss of natural habitat. Wetland buffers and other retained natural areas should be planted exclusively with native plant species appropriate to the McKinleyville area. Finally, CDFW suggests refining the development standard to expressly prohibit invasive plant species listed in the <u>Cal-IPC Inventory</u>. Although the plant list does prohibit several of the most problematic genera (e.g., brooms, heathers), the Cal-IPC Inventory is more comprehensive and is regularly updated.

Submittal of Biological Data to CNDDB

CEQA requires that information developed in Environmental Impact Reports and Negative Declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code § 21003(e)). Accordingly, please report any special status species and Sensitive Natural Communities detected during Project surveys to the California Natural Diversity Database (CNDDB). Additional information and instructions for data submission can be found on the CNDDB website.

Thank you for the opportunity to comment on this NOP. CDFW staff are happy to consult with the County and provide technical expertise. Please contact Kathryn Rian, Environmental Scientist, at kathryn.rian@wildlife.ca.gov with any questions or comments.

Sincerely,

—DocuSigned by: Pelecca Marward

Rebecca Garwood, Coastal Habitat Conservation Program Manager Northern Region

References: Page 6

ec: State Clearinghouse, Office of Planning and Research

State.Clearinghouse@opr.ca.gov

Rebecca Garwood, Michael van Hattem, Kathryn Rian

California Department of Fish and Wildlife

References

CDFW. 2024. California Natural Diversity Database. Biogeographic Data Branch, California Department of Fish and Wildlife. Retrieved March 11, 2024, from https://wildlife.ca.gov/Data/CNDDB.

California Department of Transportation

DISTRICT 1
P.O. BOX 3700 | EUREKA, CA 95502–3700
(707) 445-6600 | FAX (707) 441-6314 TTY 711
www.dot.ca.gov





April 26, 2024

1-HUM-101-McKinleyville Town Center Re-Zone SCH# 2024031111

Jacob Dunn
Planning and Building Department
County of Humboldt
3015 H Street
Eureka, CA 95501

Dear Mr. Dunn:

Thank you for giving Caltrans the opportunity to review the McKinleyville Town Center Re-Zone Notice of Preparation, which would establish mixed use zoning, relocate the town center, enable new development capacity of up to 2,655 new multi-family residential units and allow 1,387,822 square feet of new commercial development. The project is located between Heartwood Drive on the south, Railroad Drive on the north, and extending from McKinleyville Avenue on the west to the eastern edge of Pierson Park, in the unincorporated community of McKinleyville. We have reviewed the proposal and offer the following comments:

California's transportation sector accounts for more than half of all greenhouse gas (GHG) emissions produced statewide. In order to meet the State's ambitious goals to improve air quality and combat climate change, those entrusted with the planning, design and building of the State's transportation infrastructure must do more to tackle climate change. As land use establishes where trip origins and destinations will be created, new development affects both the number of trips made and the length of each trip. By assessing vehicle miles traveled for new development, the County can do its part to build an equitable and sustainable transportation system for residents and visitors.

One tool that is being used to estimate the Vehicle Miles Traveled (VMT) for site-specific development in some of the larger population centers in the State is the Green TRIP Connect tool (https://connect.greentrip.org/). Green TRIP Connect helps to instantly calculate how smart location, affordable homes and traffic reduction strategies can reduce driving and greenhouse gas emissions from residential development. It also calculates how much money and space can be saved from

Jacob Dunn 4/26/2024 Page 2

right-sized parking. We suggest that the County consider this among other tools to consider VMT generated from new housing development.

The McKinleyville Town Center Re-zone Notice of Preparation was missing a Location Map and a Proposed Town Center Zoning Map.

Project Objectives #1-13, p.3:

- We recommend that Bullet #6 be reworded to clarify what is meant by "ease ped/bike traffic" on Central Ave. We believe the plan/project objective should be re-written to promote the use of design alternatives capable of reducing the level of traffic stress (LTS) for bicycle/pedestrian users as a means to increase use by non-motorized modes of transportation.
- Bullet #11 identifies conceptual elements for inclusion that would improve ped and bike movement and connectivity to commercial uses and to transit stops. An additional recommendation to better incorporate transit service into the Town Center plan could include a McKinleyville Transit Center. A transit center would help to establish a Transit-Oriented Development and serve as a hub for transit network connectivity in the community.
- The project objectives do not identify commercial or public office space among
 the mixed use or (retail) commercial designations. Retaining commercial office
 space within the Town Center would allow for more living wage jobs to be
 established in the community, which would address the jobs/housing imbalance
 and support small, local businesses that cater to office workers.

<u>Page 9</u>, Transportation paragraph could identify a greater range of transportation types for review of the system network, circulation, and supporting infrastructure.

Town Center NOP could include policies and objectives related to planning for broadband and zero emission charging infrastructure for transit and how this will be integrated in the Town Center rezone (transit, parking, goods unloading, access).

<u>Rezone NOP design, codes/ standards</u>. There is an opportunity for design codes and standards to integrate land uses with transit, motorized and active transportation, and to be consistent with regional and state transportation, mobility, and climate plans.

<u>Mixed Use</u>. This section could include the possibility of a Transit Oriented Development (TOD) in the mixed-use objectives and project description for the Town Center. Transit, the Transit Center hub and its link to land use, local bike/ped and regional connectivity could be stronger and made its own bullet objectives.

We recommend that more references to transit (and zero emission charging infrastructure) be integrated in the NOP objectives and relevant sections (elements) and more on a future TOD transit hub in the EIR.

Town Center Rezone EIR Transportation-Land Use Sections

- 1. Rezone EIR NOP (and codes) should be consistent with key grant projects:
 - 2023 McKinleyville Multimodal Connections Project.
 The McKinleyville Town Center Rezone Project and EIR should be consistent with the planning objectives, projects, policies, and recommendations in the 2023 McKinleyville Multimodal Connections Project, Humboldt County's 20/21 Sustainable Transportation Planning Grant project. In particular, the Rezone EIR should address the planning objectives and recommendations relating to: Project Area Focus Corridors, especially Central Avenue; Transit Access Improvements; connectivity; future planning and engineering design; underserved community benefits; and Next Steps.
 - Humboldt Multimodal & Vibrant Neighborhoods Planning.
 This planning effort proposes to develop multimodal, walk/bike friendly neighborhood planning (with transit). The Town Center Plan EIR could consider findings and principles that result from this planning grant effort.
 - HCAOG's Dan Burden Walkability Audits (July 2023) This audit should be reviewed for any standards that could be used for how to design ped friendly environments: https://www.hcaog.net/documents/dan-burden-walkability-audits-and-presentations.

2. Transit considerations:

We recommend that the plan involve participation from local area transit agencies, particularly Humboldt Transit Authority and HCAOG, on the Rezone EIR to ensure consistency with Transit, Humboldt County regional transportation plans and policies. We recommend that the NOP and Rezone EIR consider:

- McKinleyville Transit Study (2021)
- Consistency with Transit and Humboldt region STP grant projects
- First/last mile connectivity, mobility-on-demand, microtransit, Paratransit.
- Future McKinleyville Transit Center hub, transit facilities.
- Consistency with HTA transit service and plans. Consider how McKinleyville connects to region/interregional transit service and communities
- Tribal Transit Service
- Access, circulation, and facilities for transit, in design, codes

- ZE charging infrastructure needs and codes
- Review if the Rezone EIR and design codes will include transit, land use and bike/ped network needs and facilities to meet state transportation goals to increase transit ridership 4 to 6 times above current ridership levels
- Design: NOP of EIR could benefit from a combined analysis of land use/housing, transit and active transportation facilities to assess how well the Town Center rezone (codes, standards) would meet regional and state goals for transportation (reduced GHG, VMT), increased transit ridership, safe bike/bike use(lower level of stress), connectivity and climate goals.
- 4. <u>RTP, Regional Plans</u>: Humboldt County's 2022-42 Regional Transportation Plan, Variety in Rural Options of Mobility (VROOM). The NOP of Rezone EIR should review the RTP's transportation/circulation element goals, policies, and implementation measures for (and not limited to):
 - Land Use-Transportation; Tribal Transportation; Public Transportation; Goods Movement (parking, unloading)
 - Complete Streets, and Commuter Trails
 - Global Climate, and engagement and equity considerations (underserved communities)

https://www.hcaog.net/documents/regional-transportation-plan-vroom-2022-2042.

5. Caltrans District Plans

- Caltrans District Active Transportation Plan
- Humboldt Regional Bicycle Plan
- Humboldt County Regional Trails, and Pedestrian, Master Plans
- HCAOG Transit Development Plan Update. TDA Unmet Transit Needs.

6. State Plans

Design codes and standards should be consistent with goals and objectives of state transportation and climate plans and programs including:

- CTP 2050
- Smart Mobility Framework
- Caltrans Strategic Plan
- Modal Plans (CA State Bicycle & Pedestrian Plan, State Transit Plan)
- CAPTI
- Master Plan for Aging

We concur with the statement from the NOP, that complete streets will be considered: "Proposed modifications to adjacent roadways as identified in the Q-Zone regulations

Jacob Dunn 4/26/2024 Page 5

will be reviewed for their feasibility and effect on traffic operations and bicycle and pedestrian safety and connectivity, as will the proposed road network identified in the Q-Zone regulations." This switch to mixed-use zoning will be an overall benefit for the community and a move in the right direction for a more multimodal community.

Please consider impacts to water quality, stormwater, and impacts to existing stormwater conveyance facilities such as ditches and culverts. If runoff from new development will ultimately be conveyed through Caltrans systems, please provide water quality treatment plan, calculations for increase in runoff, and capacity analysis of the Caltrans systems that would be impacted. If Caltrans' existing facilities are not adequate to convey the increased flows, this project may be required to upsize Caltrans culverts to accommodate the impacts of the new development.

Please contact me with questions or for further assistance with the comments provided at (707) 684-6879 or by email: <jesse.robertson@dot.ca.gov>.

Sincerely,

Jesse G. Robertson

JESSE ROBERTSON System Planning Branch Chief Caltrans District 1

e-copy: Beth Burks, Executive Director, Humboldt County Association of

Governments (HCAOG)

Greg Pratt, General Manager, Humboldt Transit Authority



TRANSMITTAL

TO Humboldt County Planning Department Director John Ford Department Staff Elizabeth Schatz and Jacob Dunn

May 2, 2024

FROM Life Plan Humboldt Board President Ann Lindsay
Board Members Kirk Girard, Greg Orsini, George Williamson
Project Manager Laura Kadlecik

SUBJECT McKinleyville Town Center - Environmental Impact Report Scoping Comments

The County of Humboldt has contracted with EMC Planning Group to prepare the McKinleyville Town Center Program Environmental Impact Report (EIR) to analyze:

- 1. Modifications to the McKinleyville Town Center Q-Zone guiding development in McKinleyville Community Plan's Town Center; and
- 2. A wetland definition change from single to three parameters in the Town Center area.

The County issued a Program EIR Notice of Preparation (NOP) and Life Plan Humboldt (LPH) representatives attended a April 16 2024 meeting with County staff, prior to the Program EIR scoping meeting, to discuss the EIR process, schedule and LPH entitlements.

LPH has contribute financially to the EIR and seeks environmental compliance to secure all discretionary entitlements for our proposed aging in place senior living community campus on approximately 14.6 acres of the Town Center site South of Hiller Road.

At our meeting, County staff, informed LPH representatives that the McKinleyville Town Center Rezone Program EIR would provide sufficient California Environmental Quality Act (CEQA) analysis and compliance for all County discretionary entitlements and that upon PEIR Certification and rezoning, LPH could proceed with filing ministerial permits (building, grading, infrastructure improvements) without further discretionary review. Other entitlement process issues confirmed at the meeting:

- LPH will be filing wetland modification permit and a parcel map application with the County;
- LPH will be applying to regulatory agencies for wetland mitigation, concurrent with EIR;
- As an applicant LPH is entitled to review /comment on all administrative draft EIR documents prior to release for public review;
- The EIR will include multiple LPH project references, as indicated in *topics listed* below, to substantiate project level review and eliminate need for additional discretionary review;
- The importance of maintaining the schedule, with the EIR complete by end of 2024 and Planning Commission/Board of Supervisor hearings/ EIR certification by end of March 2025.

• In addition, LPH requested that reference the LPH project be incorporated into each element of the EIR, namely:

Summary

Add a LPH Campus Overview.

Environmental Setting

Reference LPH provided physical setting description for South of Hiller Road.

Project Description and Objectives

Reference LPH's consistent community plan and zoning ordinance mixed use objectives.

Intended EIR Uses

Review and consultation requirements required by regulatory agencies and/or funders.

Aesthetics and Visual Resources

Qualitative Aesthetics and Visual Resources descriptions of campus architecture.

Air Quality, Greenhouse Gas Emissions, and Energy Analyses

Air Quality & Emissions Modeling

Qualitative description of emission sources for LPH campus.

Energy

Reference reduced fuel consumption due to electric vehicle use and reduced trips due to ridesharing, alternative modes including transit, bicycle, walking and LPH van use. In addition, the LPH population is expected to drive less and at least 24 of the residents in supportive housing will not be driving at all and planned onsite energy and storage.

Greenhouse Gas Emissions

Reference reduced GHG emissions due to limited vehicle fuel consumption, no natural gas use except for commercial cooking, and planned PV solar and energy storage system.

Biological Resources

Reference biological resource impacts to 23,940 sq. ft of three-parameter wetland, and 895 sq.ft. and one-parameter wetlands.

Cultural Resources

Reference William Rich Associates investigation, determining no historical resources (Title 14 CCR §15064.5(a)), unique archaeological resources (PRC §21083.2 (g)), or tribal cultural resources, as defined in PRC §21074, appear to be present at this proposed project location.

Hydrology and Water Quality

Reference impervious surfaces increase, noting LPH design will maximize pervious surfaces resulting in no net runoff features and onsite retention to maintain water quality; and how layout of LPH development is being designed to minimize the filling of wetlands as much as possible.

Public Services and Recreation

Reference recreational features, reduced effects on McKinleyville CSD due to onsite recreation amenities; reduced security effects due to onsite staffing on Humboldt County

Sheriff's Department, and minimal effects on local schools; connection of Midtown Trail form Central Estates to Hiller Road across the LPH project site.

Water and Sewer

Reference reduced water consumption and wastewater generation due to conservation measures beyond CSD requirements.

Transportation

Reference vehicle trip reduction strategies including ridesharing and promoting alternative modes such as transit, bicycling, walking and LPH vans. Reference reduced lane width for Hiller Road and traffic calming entry features on Nursery Way.

Tribal Cultural Resources

Reference William Rich Associates Cultural Resources study referenced above.

Noise

Reference acoustic features of campus architecture to minimize offsite noise, and low volume levels for onsite events.

Solid Waste

Reference proposed zero waste facility, to minimize effects of increased solid waste generation.

Wildfire

Reference Wildfire Fire Risk Analysis and Planning Efforts Memo to Kendal Corp.

Land Use

Reference Campus design consistency and compatibility with Q Zone Mixed Use guidelines

• To establish these comments in the public record LPH requests that the County prepare and submit a scoping report that includes these comments as part this EIR NOP process.

From: Dunn, Jacob

Schatz, Elizabeth; Ron Sissem; Ford, John To:

Cc: McNamara, Cade

FW: Comment Letter--McKinleyville Town Center Rezone Notice of Preparation Subject:

Date: Friday, May 3, 2024 1:41:04 PM

Attachments: image001.png



Jacob Dunn

Associate Planner

Planning and Building Department

3015 H Street | Eureka, CA 95501

Phone: 707-267-9390 | Fax: 707-445-7446

Email: jdunn@co.humboldt.ca.us



Please consider the environment before printing this e-mail

From: Kelley Garrett <kelleybrookgarrett@gmail.com>

Sent: Friday, May 3, 2024 1:24 PM

To: Dunn, Jacob <jdunn@co.humboldt.ca.us>

Subject: Comment Letter--McKinleyville Town Center Rezone Notice of Preparation

Caution: This email was sent from an EXTERNAL source. Please take care when clicking links or opening attachments.

Hello,

Thank you for the opportunity to comment on the upcoming McKinleyville Town Center EIR at this NOP stage.

My understanding of the CEQA process is that comments at this time can help determine the development course of the soon-to-be-produced EIR.

I support the primary goals of the Town Center. What follows are my comments to help clarify EIR direction.

Project Overview, sentence four "The Q-Zone will support... and wetland preservation." This description is misleading as wetland preservation is not a driving characteristic of the project, but rather proposed mitigation to offset impacts caused by the project development. A transparent project description would be "the Q-Zone will support ... and on-site wetland mitigation including wetland preservation."

Setting/Project Location, final sentence "Several acres for the site have been defined as wetland". As an adjective, several is equivalent to few, three etc., yet near to 5 and 1/2 acres are identified on page 6 (Biological Resources) of the NOP. For transparency the factual acreage would be better suited.

Project Description, page 2 "In addition to building and other standards, the Q-Zone includes language that would change how wetlands are defined." State planning law, and subsequent case law, make it clear that the ordinance process cannot be used to modify the General Plan. This idea of amending McKinleyville Community wetland standards, outside of a full general (community) plan updating, needs to be dropped from the project description.

"The Town Center is drafted and will be evaluated in the EIR to allow subsequent development to occur without further environmental review." Life Plan Humboldt is a non-profit venture and it makes sense that public funding could be used to permit the project. However, in the case of "Pierson Mall" on the 40 plus acres north of Hiller Rd--is this not a gift of public funds (planning dollars) to a private development corporation? Why are public planning dollars being spent to permit such a private project?

Project Objectives, 9. "Develop appropriate design review standards consistent and compatible with the... entire Humboldt County General Plan". A loud No. A community Plan is additive to the General Plan. The reason we have Community Plans, derived from community input, is to better serve the conditions and desires of the local community versus the general county.

Project Objectives, 11. Protect natural land forms. Quite a large acreage of natural wetlands are proposed to be filled by Pierson Mall. How does this synch as a project objective?

Thank you for this opportunity to provide input.

Best Regards,

Kelley Garrett

McKinleyville

(707) 497-4376

McKinleyville Town Center Q-Zone Regulations



McKinleyville Town Center Q-Zone



Draft

March 28, 2024

Final MMAC Review Draft

1 Purpose and Intent

The McKinleyville Town Center Q-Zone_is intended to conform to the McKinleyville Community Plan which creates a unique community center characterized by development emphasizing multi-modal connectivity (pedestrian, bicycle, and public transit), public meeting and gathering spaces, open space and wetland preservation with a full range of mixed-use commercial, office, civic and high-density residential uses.

2. Zoning

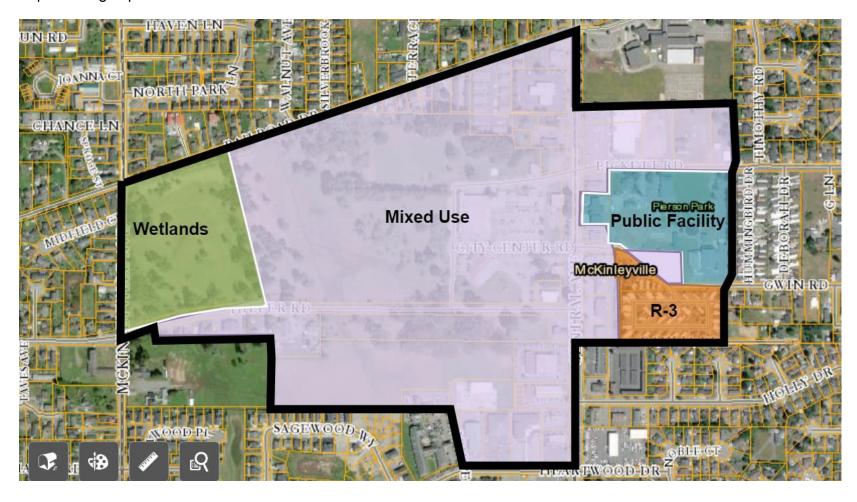
2.1 Classifications

The Q Zone is an overlay district modifying the underlying principal zone of Mixed Use. The Q zone incorporates the R-3 Residential Multiple Family, Public Facility districts and Streamside Management Areas and Wetlands provisions from the Zoning Ordinance to implement the vision for the McKinleyville Town Center. The different districts are shown on Map 1-Zoning Map. The boundaries of these districts may be adjusted to allow better project design as part of a discretionary permit.

2.2. The following table specifies the allowable uses within the McKinleyville Town Center.

Allowed Land Uses and Permit Requirements		
R-3: Residential Multiple Family		
Uses and permit requirements as specified in Section 314-6.4 of Chapter 4 of the Zoning Regulations		
PF1: Public Facility (Urban)		
Uses and permit requirements as specified in Section 314-4.4 of Chapter 4 of the Zoning Regulations		
STREAMSIDE MANAGEMENT AREAS AND WETLANDS		
Uses and permit requirements as specified in Section 314-38 of Chapter 4 of the Zoning Regulations		

Map 1 - Zoning Map



MU1: Mixed Use (Urban)

The following table supersedes Section 314-9.1 of Chapter 4 of the Zoning Regulations

	Permit
Land Use Type	Requirements
Public Gathering Use Types	
Public Recreation	Р
Farmers/Seasonal Market	Р
Multi-Use Plaza Areas	Р
Amphitheaters	SP
Pocket Parks	Р
Commercial Use Types ^{1,2}	
Retail sales and services	Р
Artisan's workshop or handicraft manufacture ³	Р
Micro-brewery/Winery/Distillery	Р
Restaurants	Р
Pop-Up Businesses (At locations designed for such activity)	Р
Bank, financial services	Р
Office: Business, administrative, governmental, and medical	Р
Residential	
Mixed Use (commercial/residential)	Р
Multi-Family Residential (Minimum density 16 Units/acre) ⁴	Р
Family Day Care Home (12 or fewer in home)	Р
Family Day Care Center	SP
Senior Housing Complex	Р
Rooming and boarding houses	Р
Emergency Shelters	Р
Hotels and inns	Р
Civic Use Types	
Post Office	Р
Community Assembly	SP
Churches	SP
Civic buildings	Р
Library	Р
Private and Public Schools	SP
Art galleries	Р
Transit Centers	Р

Notes

- 1. Shall not include drive-thru operations or include "big-box" department stores.
- 2. Not including filling stations, automotive repair, or retail service requiring permanent outdoor storage, not including temporary or periodical sidewalk display of goods.
- 3. Must contain gallery or sales of crafts or products produced on site.
- 4. The parcel surrounded by Railroad Avenue, the wetland parcel and north of Hiller can have up to 25% devoted to multi-family residential without a commercial component

3.0 Mixed Use - Standards

3.1 Building Development Standards

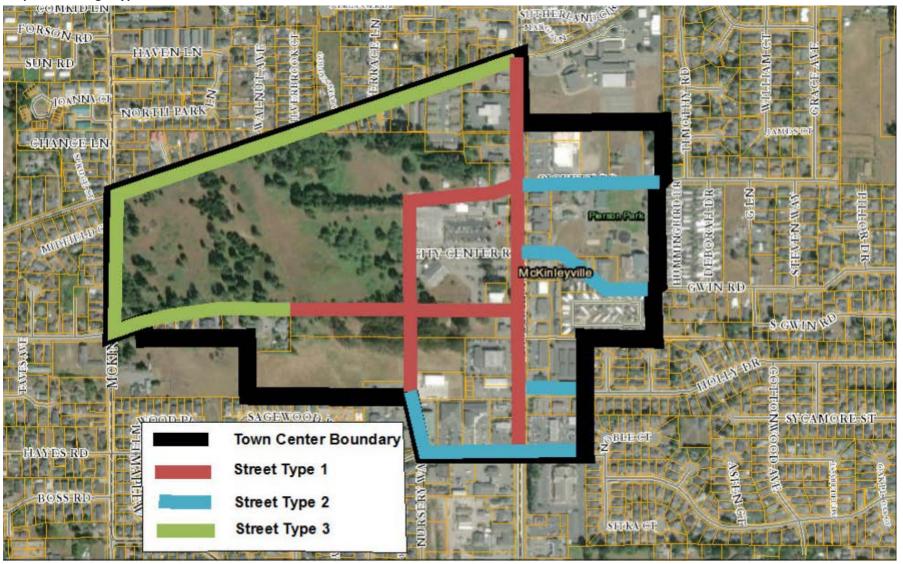
Lot Size Requirements	
Minimum Lot Size	2,000 square feet
Minimum Lot Width	25 feet
Maximum Lot Depth	None specified
Building Standards	
Minimum Front Yard Setbacks	O, except where frontage is in a block including a Residential Zone, where the front yard shall be the same as required in such Residential Zone
Minimum Rear Yard Setbacks	15 feet, except that where a rear yard abuts on an alley, such rear yard may be not less than five feet (5').
Minimum Side Yard Setbacks	O, except a side yard of an interior lot abuts a Residential Zone where the side yard shall be the same as that required in such Residential Zone
Maximum Ground Coverage	One hundred percent (100%)
Maximum Building Height	4-stories

3.2 Building Form Standards

Building Form is a function of the street type. Street types are defined by the intended volume of traffic and focal points for the town center. Street Type is defined by Map 2 and the allowed building form is defined in the following table.

Exceptions to the building form standards may be made for senior housing and multifamily housing to develop a more residential development pattern. Exceptions may include deviation from minimum building height to allow single story structures, building design and form, frontage setbacks and on-site parking shall be allowed.

Map 2 – Frontage Types



Building Form		Street Type (see Map 2)		
Standards	Description	1	2	3
Allowable Frontage	e Types			
Note: Dashed vertical lin frontages	ne on the images below is a representation of property line	e and shows the dif	ference between the	public and private
Porch, Projecting or Engaged	The main facade has a small setback from the street. The projecting porch is open on three sides and all habitable space is located behind the setback line.	Not allowed	Not allowed	Allowed
Side view	Plan view			
Shopfront	The main facade is at or near the frontage line with an entrance along the public way. This type is intended for retail use. It has substantial glazing at the sidewalk level and may include an awning that may overlap the sidewalk. It may be used in conjunction with other frontage types.	Allowed	Allowed	Allowed only within corner lots
•				
Side view	Plan view			

Building Form		Street Type (see Map 2)		
Standards	Description	1	2	3
Forecourt	The main facade is at or near the frontage line and a percentage is set back, creating a small court space. The space could be used as an entry court or shared garden space for apartment buildings, or as an additional shopping or restaurant seating area within commercial areas.	Allowed	Allowed	Allowed only within corner lots
Side view	Plan view			
Gallery	The main facade is at the frontage line and the gallery element overlaps the sidewalk. This type is intended for buildings with ground-floor commercial uses and may be one or two stories. The gallery should be used to provide the primary circulation along a frontage and extend far enough from the building to provide adequate protection and circulation for pedestrians.	Allowed	Allowed	Not allowed
	h - 6614			
Side view	Plan view			

Building Form		Street Type (see Map 2)		
Standards	Description	1	2	3
Arcade	A covered walkway with habitable space above often encroaching into the ROW The arcade should be used to provide the primary circulation along a frontage and extend far enough from the building to provide adequate protection and circulation for pedestrians. This type is intended for buildings with ground floor commercial uses and is common along public courtyards and paseos.	Allowed	Allowed	Not allowed
Side view	Plan view			
Building Placement			_	
Build-to Line – Front	A build-to line (BTL) is a set building line on a lot, measured parallel from the front and/or corner side lot line, where the structure must be located. The BTL is intended to assist in shaping the public space of streets to enhance the comfort and convenience of the pedestrian experience	0 feet	0 feet	20 feet
Build-to Line – Side (Corner Lot)	The building facade must be located on the build-to line. Facade articulation, such as window or wall recesses and projections are not counted as the building façade line, which begins at the applicable façade wall	0 feet	0 feet	20 feet

Building Form		Str	eet Type (see Ma	p 2)
Standards	Description	1	2	3
Proportion of building built to BTL – Front	A build-to percentage specifies the percentage of <u>all</u> <u>building facades within a block</u> that must be located within a build-to line. Facade articulation, such as window or wall recesses and projections, do not count	80% minimum	50% minimum	0% minimum
Proportion of building built to BTL – Side (Corner Lot)	against the required build-to percentage	30% minimum	20% minimum	0% minimum

Additional Building Placement Requirements:

- For Street Types 1 and 2, building facades must be built to BTL within 30 feet of every corner.
- Rear-facing buildings, loading docks, overhead doors for garage access (not including overhead doors with windows that meet transparency requirements and that are used to provide the types open air access typically used by cafés, restaurants, or bars) and other service entries are prohibited on street-facing facades.
- All floors must have a primary ground-floor entrance that faces the primary or side street.
- Any building over 60 feet in width must be broken down to read as a series of buildings no wider than 40 feet each.

Frontage	Criteria
-----------------	----------

Torreage erreeria				
Front Encroachment	Canopies and Awnings may encroach over the BTL on the street sides and into the setback on the rear, as shown in the shaded areas.	8 feet maximum	8 feet maximum	None specified
Side Street Encroachment	Canopies and awnings may project 8 feet maximum from façade to a distance of 1 foot from the curb line and must have 9 feet vertical clearance	6 feet maximum	6 feet maximum	None specified
Rear Encroachment	Only Balconies are allowed at the rear encroachment.	4 feet maximum	4 feet maximum	None specified

Building Form		Street Type (see Map 2)		
		1	2	3
Standards	Description			
Forecourt Depth				
		≤20 % of	≤20 % of	≤20 % of
		building depth	building depth	building depth
Forecourt Width				
		≤50 % of	≤50 % of	≤50 % of
		building width	building width	building width

Additional Forecourt Requirements:

- Buildings with forecourt facades shall not be located adjacent to other buildings with forecourt facades.
- Forecourt building frontages along public streets are required to provide pedestrian oriented spaces that provide opportunities for outdoor dining, the temporary display of retail goods or space for people to gather. Design criteria for pedestrian-oriented open space:
 - o Surfaces shall be either concrete or decorative pavers.
 - o Pedestrian-oriented lighting, no more than 14 feet in height, shall be provided and may be free standing or building-mounted.
 - o Where the space is not created to provide outdoor café-style seating, at least one of the following shall be provided: pedestrian amenities such as a benches, water feature, drinking fountain, and/or distinctive paving or artwork.
 - o Other methods that meet the intent of the standards, especially where materials are more permeable

Building	Setbacks
----------	----------

Front Yard Setback		See build-to lines above		
Rear Yard Setback	A required specified distance between buildings or structures and a lot line or lines, measured perpendicularly in a horizontal plane extending across the complete length of said lot line or lines	5 feet	5 feet	15 feet
Side Yard Setback		0 feet	0 feet	15 feet
Building Height Maximum	Building height is intended to be regulated primarily through the number of stories within the building; however, maximum and minimum heights are provided and are to be measured from the sidewalk to the eve, cornice, or base of parapet wall in order to encourage a variety of building heights and roof forms.	4 stories	3 stories	35 feet

Building Form Standards	Description	Street Type (see Map 2)		
Stanuarus	Bescription	1	2	3
Building Height Minimum		2 stories	2 story	None specified
	To ensure that building massing does not appear artificially uniform or monotonous, at least one of the following building height articulation methods shall be employed: • Upper floor ceiling height shall be varied in relation to adjacent buildings, where upper floor ceiling heights are at least 80 percent of required first floor ceiling height. • Use of different roof form from neighboring building(s). • Vary roof height by at least 5% from neighboring building(s). Step-back top floor from lower floors and include terraces and green roofs.	Applicable	Applicable	Not Applicable
Transparency Zone The transparency extends	upward from 30 inches above ground to 8 feet above-ground. For Forecourt frontages, the ground-floor side walls are exempt from transparency requirements, but subject to Blank Wall standards (see below) Transparent windows and doors are required along at least 60% of the Transparency Zone shown in the figure to the left. Tack-on display cases do not qualify as transparent areas.	Applicable	Applicable	Applicable to Storefront or Forecourt Frontages

Building Form Standards	Description	Street Type (see Map 2)		
	- 3331.	1	2	3
Blank Wall Standards	Untreated blank walls more than 10' in length adjacent to and visible from a street, parking lot, public park, common open space, or pedestrian pathway are prohibited. Where a wall is visible from any of the above areas at least two of the following wall treatments shall be installed: • Display windows; • Landscape planting beds at least 5 feet wide or a raised planter bed at least 16 inches high and 3 feet wide in front of the wall with planting materials that are sufficient to obscure or screen at least 50 percent of the wall's surface within three years; • A vertical trellis in front of the wall with climbing vines or plant materials; • Painted mural(s); or Sculpture(s)	Applicable	Applicable	Applicable

4. **CONNECTIVITY**

4.1 Objectives

Pedestrian, bicycle, transit, and vehicular improvements are required components of the Town Center. The connections below shall be designed and constructed as part of development. Improvements shall be designed and constructed at the earliest practical stage of development or as specified below.

- 4.1.1 <u>Town Center Thoroughfares</u>. There are two primary thoroughfares within the Town Center, Central Avenue and Hiller Road.
 - 4.1.1.1 Central Avenue will transition into a core component of the Town Center subject to the Building Form requirements of 3.2 above and with a street cross section shown on Exhibit 1. Funding for the improvement of Central Avenue shall be from a source other than development along Central Avenue.
 - 4.1.1.2 Hiller is intended to be the focal entry of the Town Center subject to the Building Form requirements of 3.2 above and with a street cross section shown on Exhibit 2. This cross section may be modified to account for Residential development, in which case all parking shall be located on one side of the street.
- 4.1.2 <u>Local Streets</u> The are several local streets as shown on Map 2 including two new connections:
 - **4.1.2.1** Nursery Way Extension to Hiller Road.
 - **4.1.2.2** Connection from either Railroad across the site to Hiller Road or to the extension of Nursery Way north of Hiller.
- 4.1.3 <u>Bicycle and Pedestrian Connections</u>. Map 3 shows on-street and off-street bicycle trails and pedestrian connections including:
 - **4.1.3.1** East-West Trail linking Mckinleyville Avenue on the west with Pierson Park on the east, running though the existing shopping center and crossing Central at Gwin. This will connect the open space on the west with the park on the east.
 - **4.1.3.2** North-South connector linking the Mid-Town trail.
 - **4.1.3.3** Class I bicycle path along Hiller connecting McKinleyville Ave and Central.

These bicycle/pedestrian connections shall be constructed as part of subdivision improvements, site improvements associated with development or shall be completed prior to 25% of the currently undeveloped portion of the Town Center area is developed.

4.1.4 <u>Transit Facilities</u>. There shall be an enhanced transit facility located with convenient access to Central Avenue providing simultaneous loading space for multiple buses, bike lockers, and if grant or other funding is available space for park and ride. This shall be constructed and operational before 50% of the buildable town center area is developed.

Map 3: Bike and Pedestrian Connections



Exhibit 1 Central Cross Section

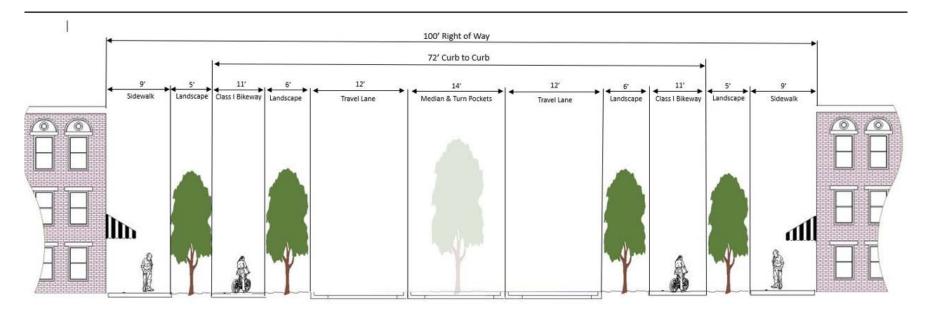
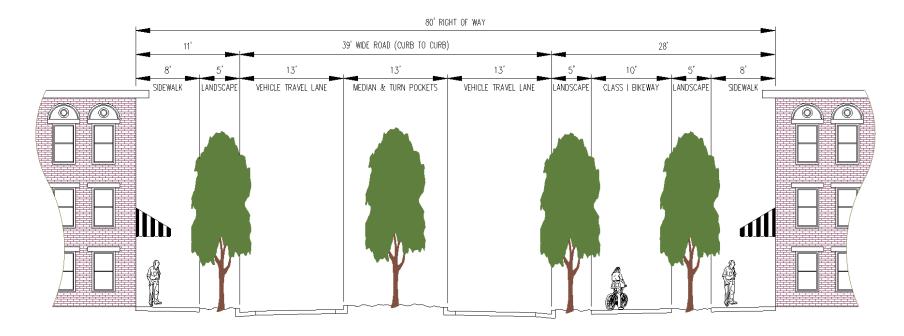


Exhibit 2 Hiller Road



HILLER ROAD PROPOSED TYPICAL SECTION

-NOT TO SCALE -

ON STREET PARKING (PARALLEL OR ANGLED) TO BE ADDED AS REQUIRED; ADDITIONAL RIGHT OF WAY REQUIRED LANDSCAPING IS DEPENDENT UPON A PERMANENT FUNDING SOURCE BEING PROVIDED TO FUND FOR ONGOING MAINTENANCE

4.2 Standards for Landscaping along Thoroughfares

- 4.2.1 Thoroughfare designs include areas for landscaping which shall include plants from the list in Exhibit A and achieve the following:
 - **4.2.1.1** Street trees capable of reaching a height of 20 feet and planted approximately 25 feet apart.
 - **4.2.1.2** Delineator trees and shrubs capable of producing color to demarcate intersections and driveways,
 - **4.2.1.3** Landscape materials shall be spaced to maintain frontage visibility and safety.

5 TOWN CENTER AREA SITE DESIGN AND DEVELOPMENT STANDARDS

- **5.1 Design Review**. Review for compliance with the provisions of this ordinance shall be through a Zoning Clearance Certificate issued by the Director of Planning and Building. The purpose of the design review is to ensure that structures are properly designed for the site and harmonized with surrounding sites and structures and to comply with the provisions of this Q Zone.
 - **5.1.1 Architecture.** Originality in architecture is encouraged. Architecture, which is inharmonious and monotonous, is barred consistent with the provisions of the Q-Zone.
 - **5.1.2 Site Design**. Site design shall include the required provisions of this Q-zone, including pedestrian connections, plazas and people spaces, appropriate landscaping, and location of the building on the property.
 - **5.1.3 Submittal Requirements**. The following items shall be submitted as part of the Building Permit/Zoning Clearance Certificate application:
 - **5.1.3.1 Site Plan.** A site plan, drawn to scale, showing the proposed layout of structures and other improvements, including, where appropriate, driveways, pedestrian walks, offstreet loading areas, landscaped areas, fences, and walls.
 - **5.1.3.2 Landscape Plan.** A landscape plan, drawn to scale, showing the locations of existing trees proposed to be removed and proposed to be retained on the site, the location and design of landscaped areas, and the varieties of plant materials to be planted therein, and other landscape features.
 - **5.1.3.3 Architectural Drawings**. Architectural drawings or sketches, drawn to scale, showing all elevations of the proposed structures as they will appear upon completion. All exterior surfacing materials and colors shall be specified and scale drawings of all signs subject to architectural review showing the size, location, material, colors, and illumination.
 - **5.1.3.4** Requests to Deviate. Requests to deviate from the provisions of this Q-Zone may be allowed subject to approval of a Conditional Use Permit by the Planning Commission.

Parking requirements. This section modifies the Off-Street Parking standards specified in Section 314-109.1 and Mixed Use (Urban) standards specified in Section 314-9.3

5.2.1 Parking Plan

There is no minimum off-street parking requirement for non-residential development within the Town Center. Where parking is desired, parking shall be in a common parking lot established and maintained through the formation of a parking district or private parking lot.

5.1.2 Residential Off-Street Parking

On-site, off-street parking may be provided for residential development at a rate not to exceed one parking space for each residential unit. Additional guest parking may be provided in a common off-site parking facility.

5.2.2 Bicycle Parking Requirement

5.2.3 Commercial or Mixed-Use Developments

- 5.2.3.1 A minimum of three-five bicycle parking spaces shall be provided for any mixed use or commercial development project of more than 10,000 square feet.
- **5.2.3.2** Bicycle parking shall be located no further than 100 feet away from a building entrance and be visible from the uses they serve. Facilities shall not be in places that impede pedestrian flow or would cause damage to landscaping.
- **5.2.3.3** The Planning Director may reduce the required minimum number of off-street vehicle parking spaces for mixed use project by one (1) off-street vehicle space for every five (5) additional bicycle spaces provided, up to a maximum reduction of ten (10) percent.

5.2.4 Residential Development

- **5.2.4.1** A minimum of one (1) bicycle parking space shall be provided per residential unit.
- **5.2.4.2** Bicycle lockers shall be provided for each residential unit without a garage.

5.3 Parking Lot Design and Landscaping Requirements

- **5.3.1**-Driveways shall be located away from intersections and designed to minimize conflicts with pedestrian traffic.
- **5.3.2**-Parking areas shall include a minimum 10-foot-wide planter around the perimeter of the parking area and contain trees and other plant materials capable of creating a visual buffer from the street and surrounding properties.
- **5.3.3**-Pedestrian walkways shall be provided from existing or proposed public sidewalks to the customer entrance of all buildings on the site. Walkways shall connect pedestrians to transit stops, street crossings, store entry points, central features and community spaces on or adjoining the site. Landscaped areas shall be provided along the length of the sidewalk or walkway that include trees, shrubs, ground covers, or other such materials without obstructing the path of travel or creating protruding objects.

5.3.4 Parking provided in open areas shall include the following:

a. A minimum of 1 tree for every 8 parking spaces

- b. -Trees shall be placed evenly throughout the parking lot to provide visual variety in the parking lot.
- **5.3.5**-Planters shall be placed at the end of parking rows and shall be at least 4-feet wide and include trees, shrubs and groundcover.

5.4 Site Landscaping

- **5.4.1** All lot areas not covered by structures, parking lots, curbs and gutters or walkways shall be permanently landscaped with decorative plazas, pools, or the planting of grass, shrubs or trees or other comparable surface covers. All planted landscaped areas shall be provided with an irrigation system_to establish landscaping and maintain landscaping during abnormally dry periods.
- **5.4.2** Where buildings are not placed at the back of sidewalk, landscape treatment shall be designed and maintained to emphasize building entrances.
- **5.4.3** Landscaped areas may be designed to serve as stormwater management areas (e.g., bioswales).
- **5.4.4** New landscaping shall include drought resistant species native to the coastal region of Northern California or noninvasive naturalized species that have adapted to the climatic conditions of the coastal region of Northern California. Climate adapted plants, preferably native, that require occasional, little or no summer water (average WUCOLS plant factor 0.3) shall be used for one hundred (100) percent of the plant area excluding edibles and areas using recycled water.
- **5.4.5** Turf area shall not exceed twenty-five (25) percent of the landscape area.
- **5.4.6** Turf is not allowed in non-residential projects.
- **5.4.7** Landscaping shall include at least one tree installed per twenty-five feet of frontage on public or private streets.
- **5.4.8** Landscaping adjacent to Open Space areas shall consist of trees, shrubs, and ground covers native to Humboldt County and are appropriate to the conditions of the site. Non-invasive and naturalized or ornamental species may also be permitted as per recommendations from a licensed landscape architect.
- **5.5 Public Open Spaces.** The development in the town center shall provide open space areas where the public can gather, vendors can display goods and provide opportunities for other public enjoyment. A minimum of three percent of the developable but undeveloped area of the Town Center shall be devoted to this open space. A minimum of 20,000 square feet of this shall be provided in a common open space area. This shall be outside of other required components of the site design and may be centralized at one location. Provisions shall be made to demonstrate how this provision will be addressed either at the time of subdivision or when the first new development is proposed.

5.6 Lighting

5.6.1. All areas shall be appropriately illuminated to protect public safety. Lighting without a clear public safety purpose is not allowed. Lighting shall be directed at the area which requires

illumination.

- 5.6.2 Prior to issuance of permits, new development shall demonstrate exterior and site lighting meets the following criteria:
 - a) Minimum and maximum lighting levels.
 - i. Minimum (for low or non-pedestrian and vehicular traffic areas) of 0.5- foot candle.
 - ii. Moderate (for moderate or high-volume pedestrian areas) of 1-2-foot candles.
 - iii. Maximum (for high volume pedestrian areas and building entries) of 4-foot candles.
 - b) Fixture heights shall be the lowest possible to meet minimum lighting requirements but in no case taller than 20 feet. All lighting shall be shielded to prevent glare above the lighting fixture and to prevent light spillover-beyond the area to be illuminated.
 - c. Glare. No use shall create intense light or glare that causes a nuisance or hazard beyond the property line.
 - d) Lighting shall be minimized near Wetland Buffers or natural open space areas. Walkways and bicycle paths in open space areas shall be illuminated with bollard scale light fixtures illuminating the path while shielding the light from natural areas.

5.7 Other Design Standards

- 5.7.1 Outdoor trash location. Service areas shall be subject to the following requirements:
 - 5.7.1.1 The service elements shall be paved with concrete.
 - 5.7.1.2Enclosed and screened by a wall at least six feet high. Enclosures shall use materials and detailing consistent with primary structures on-site. The materials and design shall provide for a durable enclosure.
 - 5.7.1.3The sides and rear of the enclosure must be abutting another structure or screened with landscaping at least 3 feet high or at least 5 feet wide.
 - 5.7.1.4 Collection points shall be located and configured to minimize conflicts with pedestrian or vehicle traffic,
 - 5.7.1.5 Recyclables shall be protected by using weatherproof containers or by providing a roof over the storage area.
- 5.7.2 Rooftop Mechanical Equipment shall be screened, with elements integral to the design of the building.
- 5.7.3 Odors. No use shall create objectionable odors readily detectable beyond the property line.
- 5.7.4 Dust and Smoke. No use shall create dust or smoke that is readily detectable beyond the property line (in addition to meeting all applicable air pollution requirements).
- 5.7.5 Vibration. No use shall create vibration detectable without instruments at the property line.

6.0 PROTECTION, AND CONSERVATION OF WETLAND AREAS

- 6.1 Wetlands are a valuable resource and shall be conserved through onsite protection of wetlands or through relocation and replacement of wetlands on a no net loss basis. Wetland Areas will continue to be an amenity of the Town Center through protection, enhancement, and relocation of wetlands.
- 6.2 The 14 acres of property south of Railroad, east of McKinleyville Avenue, north of Hiller Road and west of the spruce trees is envisioned as a wetland preservation and conservation area. Wetland areas within the Town Center may be filled and relocated to this area.
- 6.3 Prior to issuance of any permits or granting of any entitlements on property within the Town Center a wetland delineation shall be completed delineating all three parameter wetlands (HCC Section 314-61..1.7.6.5) which exist on the property. Previously developed property is exempt from this requirement. This exemption extends to storm drain ditches graded to transport storm water outside of a natural channel or wetland.
- 6.4 Prior to issuance of construction permits or as part of a subdivision approval, a plan must be reviewed and approved by the approving authority demonstrating that either the wetland areas will be protected in place in accordance with HCC section 61.1.7.6.6) or identifying how the wetland areas will be relocated and conserved.
- 6.5 Plans to relocate wetland areas shall include:
 - 6.5.1A mapped delineation of the wetlands to be impacted,
 - 6.5.2Wetlands to be filled shall be replaced on a 1.5:1 basis, where a minimum of 1.5 square feet of wetland shall be provided for each square foot of wetland impacted. This ratio is based upon equivalent wetland replacement. Credit may be given for wetland replacement which has a higher habitat value but in no case shall the replacement ratio be less than 1:1 and mitigation shall provide an equal value of wetland habitat impacted.
 - 6.5.3. Grading plan showing how the site will be configured to ensure successful wetland creation,
 - 6.5.4 Storm water shall not drain directly into retained or recreated wetlands but shall be subject to some passive treatment either through a bioswale or sheet flow across grassland.
 - 6.5.5. The planting scheme and plant material proposed.
 - 6.5.6. Success and Monitoring Criteria: Annual monitoring criteria to rate the success of the wetland creation or enhancement effort. The monitoring period shall be a minimum of 5 years but shall not be concluded until the success objectives have been achieved for three consecutive years. Each year a monitoring report shall be provided to the Planning and Building Department evaluating the success of the plan implementation and provide suggested remedial measures needed to achieve the success criteria.
 - 6.5.7The plan shall describe the long-term plan for ownership and maintenance of the wetland conservation area. Retained and relocated wetlands shall be protected from future development through a permanent conservation easement or other instrument ensuring the biological resource values of the wetland areas will be maintained or

enhanced in perpetuity.

6.5.8The Planning and Building department shall consult with the California Department of Fish and Wildlife prior to approval of the plan.

6.5.9Mitigation credit will be given for relocation of the drainage channel parallel to Mckinleyville Avenue if it is moved to the east and regraded to support a riparian stream cross section in such a manner as to allow bicycle and pedestrian connectivity along Mckinleyville Avenue.

6.6 Preservation of Important Trees

- 6.6.1 There are significant trees within the Town Center area, and some of them will be retained and incorporated into the Town Center design as follows:
 - 6.6.1.1 The Spruce Grove north of Hiller and South of Railroad will be preserved as a buffer between the developed Town Center and the wetland preserve to the west. Prior to development around the trees an arborist shall provide a report on the health and viability of the trees. Any trees deemed hazardous or in declining health shall be removed. Trees approved for removal shall be replaced with like species. A minimum of 50% of the area containing the grove shall be retained for public open space and up to 50% may be incorporated into the developed environment.
 - 6.6.1.2 There is a small clump of Redwood trees near the back of the existing shopping center, these trees shall be retained as part of a small pocket park.

EXHIBIT A

Permitted Plant List

Rosemary

McKinleyville Community Services District

PERMITTED PLANT LIST

TREES SHRUBS GROUNDCOVERS

Japanese Black Pine

Magnolia

Granda flora Little Gem (Dwarf)

Dwarf Alberta Spruce

Liquid Amber Gin1m

Leptospennum

(Treeformed)
Japanese Blueberry

(Treeformed)

The Prunus Family:

Kwanzan Flowering Cherry Mt Fugi Flowering Cherry

Etc.

The Acer Family:

Red Maple Etc.

Maytenus Boaria

Bird nest Sprnce MugoPine

Dwarf Globe Blue Spruce Golden Globe Arborvitae

Heatherbun Chamaecyparis Thyoides Boulevard Cypress Cham Pisifera Rheingold Thuja Occidentalis

Japanese Barberry Agapanthus Leptospermum

Crimson Pygmy Berberis Thunbergi

Green Beauty Boxwood

Rosemary

Pittospornm Tenuifolium

Black stemmed Majorie Channon Nandina Gulfstream Nandina Purpia

Pieris (dwarf species only)

Blue Star Juniper

Rhaphiolepis Harbinger of Spring Only

STRICT APPROVAL REQUIRED FOR THE FOLLOWING:

(Due to temperature/placement sensitive or invasive characteristics)

Heaths

Heathers

Rhododendrons

Azaleas

Ground covers

Vines

Natural Grasses

Camelias

PROHIBITED PLANTS:

Berries

Poison Oak

Pampass Grass

All Broom Species

Pine trees

rine u e

Cedar Trees

Spruce Trees

Eucalyptus

Acacia Trees

Air Quality Modeling Results



McKinleyville Town Center Rezone Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	McKinleyville Town Center Rezone
Construction Start Date	1/5/2026
Operational Year	2045
Lead Agency	_
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	81.2
Location	40.94311154655935, -124.10697197369235
County	Humboldt
City	Unincorporated
Air District	North Coast Unified APCD
Air Basin	North Coast
TAZ	112
EDFZ	2
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	· ' '	Special Landscape Area (sq ft)	Population	Description
Retirement Community	218	Dwelling Unit	15.0	231,080	0.00	0.00	491	_

Apartments Mid Rise	2,432	Dwelling Unit	70.3	2,334,720	0.00	0.00	5,472	_
Strip Mall	633	1000sqft	14.5	632,800	0.00	0.00	_	_
General Office Building	271	1000sqft	6.23	271,200	0.00	0.00	_	_

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title		
Transportation	T-18	Provide Pedestrian Network Improvement		
Transportation	T-34*	Provide Bike Parking		

^{*} Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Un/Mit.	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Unmit.	461	30.1	1.04	17.8	0.96	4.64	27,310
Daily, Winter (Max)	_	_	_	_	_	_	_
Unmit.	462	32.3	1.24	21.0	1.14	11.3	27,214
Average Daily (Max)	_	_	_	_	_	_	_
Unmit.	276	21.0	0.77	12.1	0.71	4.46	19,130
Annual (Max)	_	_	_	_	_	_	_
Unmit.	50.3	3.82	0.14	2.20	0.13	0.81	3,167
Exceeds (Daily Max)	_	_	_	_	_	_	_
Threshold	54.0	54.0	82.0	_	82.0	_	_
Unmit.	Yes	No	No	_	No	_	_

Exceeds (Average Daily)	_	_	_	_	_	_	_
Threshold	54.0	54.0	82.0	_	82.0	_	_
Unmit.	Yes	No	No	_	No	_	_

2.2. Construction Emissions by Year, Unmitigated

Year	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily - Summer (Max)	_	_	_	_	_	_	_
2027	3.05	25.7	1.04	10.4	0.96	4.64	6,759
2028	12.3	30.1	0.99	17.8	0.91	4.60	27,310
2029	11.9	28.5	0.41	17.8	0.39	4.57	26,807
2030	11.0	27.1	0.40	17.8	0.38	4.56	26,269
2031	10.5	25.7	0.38	17.8	0.29	4.48	25,722
2032	10.0	24.5	0.29	17.7	0.27	4.46	25,224
2033	9.67	23.3	0.27	17.7	0.26	4.44	24,710
2034	9.27	22.2	0.26	17.6	0.25	4.43	24,244
2035	8.70	21.1	0.25	17.6	0.23	4.42	23,786
2036	8.49	20.5	0.24	17.6	0.22	4.41	23,379
2037	8.18	19.6	0.23	17.6	0.21	4.40	22,989
2038	7.94	19.2	0.22	17.6	0.21	4.39	22,511
2039	7.50	18.4	0.21	17.6	0.20	4.39	22,198
2040	7.11	18.1	0.21	17.6	0.20	4.38	21,892
2041	461	1.23	< 0.005	2.96	< 0.005	0.70	2,623
Daily - Winter (Max)	_	_	_	_	_	_	_
2026	3.24	29.3	1.24	21.0	1.14	11.3	5,439
2027	3.14	28.1	1.17	20.9	1.08	11.2	6,759
2028	12.4	32.3	0.99	17.8	0.91	4.60	27,214

2029	12.0	30.7	0.41	17.8	0.39	4.57	26,717
2030	11.2	28.9	0.40	17.8	0.38	4.56	26,186
2031	10.6	27.5	0.38	17.8	0.29	4.48	25,643
2032	10.2	25.7	0.29	17.7	0.27	4.46	25,149
2033	9.80	24.5	0.27	17.7	0.26	4.44	24,657
2034	8.99	23.3	0.26	17.6	0.25	4.43	24,197
2035	8.82	22.8	0.25	17.6	0.23	4.42	23,746
2036	8.57	21.7	0.24	17.6	0.22	4.41	23,343
2037	8.31	20.7	0.23	17.6	0.21	4.40	22,958
2038	8.01	20.3	0.22	17.6	0.21	4.39	22,603
2039	7.52	19.5	0.21	17.6	0.20	4.39	22,295
2040	7.18	19.1	0.21	17.6	0.20	4.38	21,854
2041	462	5.22	0.10	2.96	0.09	0.70	2,615
2042	461	1.35	< 0.005	2.96	< 0.005	0.70	2,594
Average Daily	<u> </u>	_	_	_	_	_	_
2026	0.51	4.58	0.19	3.29	0.18	1.76	852
2027	2.19	18.7	0.77	9.25	0.71	4.46	4,598
2028	5.93	20.3	0.48	10.1	0.45	3.20	13,154
2029	8.50	21.0	0.29	12.1	0.28	3.11	19,130
2030	7.88	19.9	0.28	12.1	0.27	3.10	18,748
2031	7.54	18.9	0.27	12.1	0.21	3.04	18,360
2032	7.21	17.7	0.21	12.0	0.20	3.03	18,054
2033	6.97	16.9	0.19	12.0	0.18	3.01	17,651
2034	6.65	16.1	0.19	12.0	0.18	3.01	17,321
2035	6.21	15.6	0.18	12.0	0.17	3.00	16,995
2036	6.11	14.9	0.17	12.0	0.16	3.00	16,741
2037	5.87	14.5	0.16	11.9	0.15	2.98	16,418
2038	5.63	13.9	0.16	11.9	0.15	2.98	16,176

2039	5.35	13.3	0.15	11.9	0.14	2.97	15,856
2040	1.88	6.77	0.10	3.92	0.09	1.01	5,793
2041	276	1.42	0.01	1.70	0.01	0.41	1,754
2042	3.61	0.01	< 0.005	0.02	< 0.005	0.01	20.4
Annual	_	_	_	_	_	_	_
2026	0.09	0.84	0.04	0.60	0.03	0.32	141
2027	0.40	3.42	0.14	1.69	0.13	0.81	761
2028	1.08	3.70	0.09	1.84	0.08	0.58	2,178
2029	1.55	3.82	0.05	2.20	0.05	0.57	3,167
2030	1.44	3.63	0.05	2.20	0.05	0.57	3,104
2031	1.38	3.45	0.05	2.20	0.04	0.55	3,040
2032	1.32	3.23	0.04	2.20	0.04	0.55	2,989
2033	1.27	3.08	0.04	2.19	0.03	0.55	2,922
2034	1.21	2.93	0.03	2.18	0.03	0.55	2,868
2035	1.13	2.85	0.03	2.18	0.03	0.55	2,814
2036	1.11	2.71	0.03	2.19	0.03	0.55	2,772
2037	1.07	2.65	0.03	2.18	0.03	0.54	2,718
2038	1.03	2.54	0.03	2.18	0.03	0.54	2,678
2039	0.98	2.43	0.03	2.18	0.03	0.54	2,625
2040	0.34	1.24	0.02	0.72	0.02	0.18	959
2041	50.3	0.26	< 0.005	0.31	< 0.005	0.07	290
2042	0.66	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.37

2.3. Construction Emissions by Year, Mitigated

Year	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily - Summer (Max)	_	_	_	_	_	_	_
2027	3.05	25.7	1.04	10.4	0.96	4.64	6,759

2028	12.3	30.1	0.99	17.8	0.91	4.60	27,310
2029	11.9	28.5	0.41	17.8	0.39	4.57	26,807
2030	11.0	27.1	0.40	17.8	0.38	4.56	26,269
2031	10.5	25.7	0.38	17.8	0.29	4.48	25,722
2032	10.0	24.5	0.29	17.7	0.27	4.46	25,224
2033	9.67	23.3	0.27	17.7	0.26	4.44	24,710
2034	9.27	22.2	0.26	17.6	0.25	4.43	24,244
2035	8.70	21.1	0.25	17.6	0.23	4.42	23,786
2036	8.49	20.5	0.24	17.6	0.22	4.41	23,379
2037	8.18	19.6	0.23	17.6	0.21	4.40	22,989
2038	7.94	19.2	0.22	17.6	0.21	4.39	22,511
2039	7.50	18.4	0.21	17.6	0.20	4.39	22,198
2040	7.11	18.1	0.21	17.6	0.20	4.38	21,892
2041	461	1.23	< 0.005	2.96	< 0.005	0.70	2,623
Daily - Winter (Max)	_	_	_	_	_	_	_
2026	3.24	29.3	1.24	21.0	1.14	11.3	5,439
2027	3.14	28.1	1.17	20.9	1.08	11.2	6,759
2028	12.4	32.3	0.99	17.8	0.91	4.60	27,214
2029	12.0	30.7	0.41	17.8	0.39	4.57	26,717
2030	11.2	28.9	0.40	17.8	0.38	4.56	26,186
2031	10.6	27.5	0.38	17.8	0.29	4.48	25,643
2032	10.2	25.7	0.29	17.7	0.27	4.46	25,149
2033	9.80	24.5	0.27	17.7	0.26	4.44	24,657
2034	8.99	23.3	0.26	17.6	0.25	4.43	24,197
2035	8.82	22.8	0.25	17.6	0.23	4.42	23,746
2036	8.57	21.7	0.24	17.6	0.22	4.41	23,343
2037	8.31	20.7	0.23	17.6	0.21	4.40	22,958
2038	8.01	20.3	0.22	17.6	0.21	4.39	22,603

2039	7.52	19.5	0.21	17.6	0.20	4.39	22,295
2040	7.18	19.1	0.21	17.6	0.20	4.38	21,854
2041	462	5.22	0.10	2.96	0.09	0.70	2,615
2042	461	1.35	< 0.005	2.96	< 0.005	0.70	2,594
Average Daily	_	_	_	_	_	_	_
2026	0.51	4.58	0.19	3.29	0.18	1.76	852
2027	2.19	18.7	0.77	9.25	0.71	4.46	4,598
2028	5.93	20.3	0.48	10.1	0.45	3.20	13,154
2029	8.50	21.0	0.29	12.1	0.28	3.11	19,130
2030	7.88	19.9	0.28	12.1	0.27	3.10	18,748
2031	7.54	18.9	0.27	12.1	0.21	3.04	18,360
2032	7.21	17.7	0.21	12.0	0.20	3.03	18,054
2033	6.97	16.9	0.19	12.0	0.18	3.01	17,651
2034	6.65	16.1	0.19	12.0	0.18	3.01	17,321
2035	6.21	15.6	0.18	12.0	0.17	3.00	16,995
2036	6.11	14.9	0.17	12.0	0.16	3.00	16,741
2037	5.87	14.5	0.16	11.9	0.15	2.98	16,418
2038	5.63	13.9	0.16	11.9	0.15	2.98	16,176
2039	5.35	13.3	0.15	11.9	0.14	2.97	15,856
2040	1.88	6.77	0.10	3.92	0.09	1.01	5,793
2041	276	1.42	0.01	1.70	0.01	0.41	1,754
2042	3.61	0.01	< 0.005	0.02	< 0.005	0.01	20.4
Annual	_	_	_	_	_	_	_
2026	0.09	0.84	0.04	0.60	0.03	0.32	141
2027	0.40	3.42	0.14	1.69	0.13	0.81	761
2028	1.08	3.70	0.09	1.84	0.08	0.58	2,178
2029	1.55	3.82	0.05	2.20	0.05	0.57	3,167
2030	1.44	3.63	0.05	2.20	0.05	0.57	3,104

2031	1.38	3.45	0.05	2.20	0.04	0.55	3,040
2032	1.32	3.23	0.04	2.20	0.04	0.55	2,989
2033	1.27	3.08	0.04	2.19	0.03	0.55	2,922
2034	1.21	2.93	0.03	2.18	0.03	0.55	2,868
2035	1.13	2.85	0.03	2.18	0.03	0.55	2,814
2036	1.11	2.71	0.03	2.19	0.03	0.55	2,772
2037	1.07	2.65	0.03	2.18	0.03	0.54	2,718
2038	1.03	2.54	0.03	2.18	0.03	0.54	2,678
2039	0.98	2.43	0.03	2.18	0.03	0.54	2,625
2040	0.34	1.24	0.02	0.72	0.02	0.18	959
2041	50.3	0.26	< 0.005	0.31	< 0.005	0.07	290
2042	0.66	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.37

2.4. Operations Emissions Compared Against Thresholds

Un/Mit.	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Unmit.	4,288	153	691	842	688	726	280,294
Mit.	4,281	149	691	832	688	724	271,328
% Reduced	< 0.5%	3%	< 0.5%	1%	< 0.5%	< 0.5%	3%
Daily, Winter (Max)	_	_	_	_	_	_	_
Unmit.	4,270	159	691	841	688	726	279,671
Mit.	4,263	154	691	832	688	724	270,709
% Reduced	< 0.5%	3%	< 0.5%	1%	< 0.5%	< 0.5%	3%
Average Daily (Max)	_	_	_	_	_	_	_
Unmit.	1,126	88.4	157	287	156	189	185,040
Mit.	1,120	84.6	156	279	156	187	176,814
% Reduced	1%	4%	< 0.5%	3%	< 0.5%	1%	4%

Annual (Max)	_	_	_	_	_	_	_
Unmit.	206	16.1	28.6	52.4	28.4	34.5	30,635
Mit.	204	15.4	28.6	50.8	28.4	34.1	29,274
% Reduced	1%	4%	< 0.5%	3%	< 0.5%	1%	4%
Exceeds (Daily Max)	_	_	_	_	_	_	_
Threshold	54.0	54.0	_	82.0	_	54.0	_
Unmit.	Yes	Yes	Yes	Yes	Yes	Yes	_
Mit.	Yes	Yes	Yes	Yes	Yes	Yes	_
Exceeds (Average Daily)	_	_	_	_	_	_	_
Threshold	54.0	54.0	_	82.0	_	54.0	_
Unmit.	Yes	Yes	Yes	Yes	Yes	Yes	_
Mit.	Yes	Yes	Yes	Yes	Yes	Yes	_
Exceeds (Annual)	_	_	_	_	_	_	_
Threshold	10.0	10.0	_	15.0	_	9.00	_
Unmit.	Yes	Yes	Yes	Yes	Yes	Yes	_
Mit.	Yes	Yes	Yes	Yes	Yes	Yes	_

2.5. Operations Emissions by Sector, Unmitigated

Sector	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Mobile	112	61.6	0.72	151	0.68	38.8	140,101
Area	4,176	80.9	690	690	687	687	108,121
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3

Total	4,288	153	691	842	688	726	280,294
Daily, Winter (Max)	_	_	_	_	_	_	_
Mobile	114	68.8	0.73	151	0.68	38.8	140,043
Area	4,156	79.2	690	690	687	687	107,555
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3
Total	4,270	159	691	841	688	726	279,671
Average Daily	_	_	_	_	_	_	_
Mobile	103	59.2	0.66	131	0.62	33.7	128,525
Area	1,022	18.6	155	155	154	154	24,442
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3
Total	1,126	88.4	157	287	156	189	185,040
Annual	_	_	_	_	_	_	_
Mobile	18.8	10.8	0.12	23.9	0.11	6.16	21,279
Area	187	3.40	28.3	28.3	28.2	28.2	4,047
Energy	0.11	1.93	0.15	0.15	0.15	0.15	4,016
Water	_	_	_	_	_	_	302
Waste	-	_	_	_	_	_	987
Refrig.	-	-	_	_	_	_	4.02
Total	206	16.1	28.6	52.4	28.4	34.5	30,635

2.6. Operations Emissions by Sector, Mitigated

Sector	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Mobile	105	57.6	0.68	141	0.64	36.3	131,134
Area	4,176	80.9	690	690	687	687	108,121
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3
Total	4,281	149	691	832	688	724	271,328
Daily, Winter (Max)	_	_	_	_	_	_	_
Mobile	106	64.4	0.68	141	0.64	36.3	131,081
Area	4,156	79.2	690	690	687	687	107,555
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3
Total	4,263	154	691	832	688	724	270,709
Average Daily	_	_	_	_	_	_	_
Mobile	96.5	55.4	0.62	123	0.58	31.6	120,299
Area	1,022	18.6	155	155	154	154	24,442
Energy	0.61	10.6	0.84	0.84	0.84	0.84	24,258
Water	_	_	_	_	_	_	1,826
Waste	_	_	_	_	_	_	5,965
Refrig.	_	_	_	_	_	_	24.3
Total	1,120	84.6	156	279	156	187	176,814
Annual	_	_	_	_	_	_	_
Mobile	17.6	10.1	0.11	22.4	0.11	5.76	19,917
Area	187	3.40	28.3	28.3	28.2	28.2	4,047

Energy	0.11	1.93	0.15	0.15	0.15	0.15	4,016
Water	_	_	_	_	_	_	302
Waste	_	_	_	_	_	_	987
Refrig.	_	_	_	_	_	_	4.02
Total	204	15.4	28.6	50.8	28.4	34.1	29,274

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

	(,)		<u>_</u>				
Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	3.14	29.2	1.24	1.24	1.14	1.14	5,316
Dust From Material Movement	_	_	_	19.7	_	10.1	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.49	4.57	0.19	0.19	0.18	0.18	832
Dust From Material Movement	_	_	_	3.08	_	1.58	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.83	0.04	0.04	0.03	0.03	138
Dust From Material Movement	_	_	_	0.56	_	0.29	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_

Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.09	0.09	0.00	0.12	0.00	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.01	0.01	0.00	0.02	0.00	< 0.005	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2026) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	3.14	29.2	1.24	1.24	1.14	1.14	5,316
Dust From Material Movement	_	_	_	19.7	_	10.1	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.49	4.57	0.19	0.19	0.18	0.18	832
Dust From Material Movement	_	_	_	3.08	_	1.58	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.83	0.04	0.04	0.03	0.03	138
Dust From Material Movement	_	_	_	0.56	_	0.29	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.09	0.09	0.00	0.12	0.00	0.03	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.01	0.01	0.00	0.02	0.00	< 0.005	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2027) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	3.05	28.0	1.17	1.17	1.08	1.08	5,316
Dust From Material Movement	_	_	_	19.7	_	10.1	_

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	-	_	_	_	_	_
Off-Road Equipment	0.53	4.87	0.20	0.20	0.19	0.19	926
Dust From Material Movement	_	_	_	3.42	_	1.76	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.10	0.89	0.04	0.04	0.03	0.03	153
Dust From Material Movement	_	_	_	0.62	_	0.32	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.09	0.09	0.00	0.12	0.00	0.03	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.02	0.01	0.00	0.02	0.00	< 0.005	21.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Site Preparation (2027) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
			24 /	112			

Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	3.05	28.0	1.17	1.17	1.08	1.08	5,316
Dust From Material Movement	_	_	_	19.7	_	10.1	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.53	4.87	0.20	0.20	0.19	0.19	926
Dust From Material Movement	_	_	_	3.42	_	1.76	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.10	0.89	0.04	0.04	0.03	0.03	153
Dust From Material Movement	_	_	_	0.62	_	0.32	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.09	0.09	0.00	0.12	0.00	0.03	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.02	0.01	0.00	0.02	0.00	< 0.005	21.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.50

,	/endor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2027) - Unmitigated

	s (lb/day for daily, to						
Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.95	25.6	1.04	1.04	0.96	0.96	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.95	25.6	1.04	1.04	0.96	0.96	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	1.59	13.8	0.56	0.56	0.52	0.52	3,576
Dust From Material Movement	_	_	_	4.97	_	1.97	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.29	2.52	0.10	0.10	0.09	0.09	592
Dust From Material Movement	_	_	_	0.91	_	0.36	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_

Worker	0.10	0.08	0.00	0.13	0.00	0.03	139
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.11	0.10	0.00	0.13	0.00	0.03	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.06	0.05	0.00	0.07	0.00	0.02	74.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.01	0.01	0.00	0.01	0.00	< 0.005	12.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2027) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.95	25.6	1.04	1.04	0.96	0.96	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.95	25.6	1.04	1.04	0.96	0.96	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	1.59	13.8	0.56	0.56	0.52	0.52	3,576
Dust From Material Movement	_	_	_	4.97	_	1.97	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.29	2.52	0.10	0.10	0.09	0.09	592
Dust From Material Movement	_	_	_	0.91	_	0.36	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	0.10	0.08	0.00	0.13	0.00	0.03	139
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.11	0.10	0.00	0.13	0.00	0.03	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.06	0.05	0.00	0.07	0.00	0.02	74.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.01	0.01	0.00	0.01	0.00	< 0.005	12.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)									
Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e		
Onsite	_	_	_	_	_	_	_		
Daily, Summer (Max)	_	_	_	_	_	_	_		
Off-Road Equipment	2.88	24.3	0.99	0.99	0.91	0.91	6,621		
Dust From Material Movement	_	_	_	9.20	_	3.65	_		
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Daily, Winter (Max)	_	_	_	_	_	_	_		
Off-Road Equipment	2.88	24.3	0.99	0.99	0.91	0.91	6,621		
Dust From Material Movement	_	_	_	9.20	_	3.65	_		
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Average Daily	_	_	_	_	_	_	_		
Off-Road Equipment	0.90	7.57	0.31	0.31	0.28	0.28	2,060		
Dust From Material Movement	_	_	_	2.86	_	1.14	_		
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Annual	_	_	_	_	_	_	_		
Off-Road Equipment	0.16	1.38	0.06	0.06	0.05	0.05	341		
Dust From Material Movement	_	_	_	0.52	_	0.21	_		
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Offsite	_	_	_	_	_	_	_		
Daily, Summer (Max)	_	_	_	_	_	_	_		
Worker	0.10	0.07	0.00	0.13	0.00	0.03	136		
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Daily, Winter (Max)							
Dally, Willier (Max)	_	_	_	_	_	_	_
Worker	0.10	0.09	0.00	0.13	0.00	0.03	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.03	0.03	0.00	0.04	0.00	0.01	42.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.01	< 0.005	0.00	0.01	0.00	< 0.005	7.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Grading (2028) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.88	24.3	0.99	0.99	0.91	0.91	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	2.88	24.3	0.99	0.99	0.91	0.91	6,621
Dust From Material Movement	_	_	_	9.20	_	3.65	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.90	7.57	0.31	0.31	0.28	0.28	2,060

Dust From Material Movement	_	_	_	2.86	_	1.14	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.16	1.38	0.06	0.06	0.05	0.05	341
Dust From Material Movement	_	_	_	0.52	_	0.21	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	0.10	0.07	0.00	0.13	0.00	0.03	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.10	0.09	0.00	0.13	0.00	0.03	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.03	0.03	0.00	0.04	0.00	0.01	42.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.01	< 0.005	0.00	0.01	0.00	< 0.005	7.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2028) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
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Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.99	8.92	0.30	0.30	0.28	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.99	8.92	0.30	0.30	0.28	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.40	3.62	0.12	0.12	0.11	0.11	975
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.07	0.66	0.02	0.02	0.02	0.02	161
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	11.0	7.99	0.00	14.8	0.00	3.47	14,991
Vendor	0.35	13.2	0.14	2.73	0.14	0.85	9,913
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	11.1	9.66	0.00	14.8	0.00	3.47	14,910
Vendor	0.34	13.7	0.14	2.73	0.14	0.85	9,899
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	4.47	3.67	0.00	5.68	0.00	1.33	6,066
Vendor	0.14	5.41	0.06	1.06	0.06	0.33	4,012
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.82	0.67	0.00	1.04	0.00	0.24	1,004

Vendor	0.03	0.99	0.01	0.19	0.01	0.06	664
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2028) - Mitigated

Criteria Pollutants Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO20
	RUG	NOX	PINITUE	PIVITOT	PIWZ.5E	PIVIZ.51	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.99	8.92	0.30	0.30	0.28	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.99	8.92	0.30	0.30	0.28	0.28	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.40	3.62	0.12	0.12	0.11	0.11	975
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.07	0.66	0.02	0.02	0.02	0.02	161
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Vorker	11.0	7.99	0.00	14.8	0.00	3.47	14,991
/endor	0.35	13.2	0.14	2.73	0.14	0.85	9,913
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Vorker	11.1	9.66	0.00	14.8	0.00	3.47	14,910
/endor	0.34	13.7	0.14	2.73	0.14	0.85	9,899
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_
Worker	4.47	3.67	0.00	5.68	0.00	1.33	6,066
Vendor	0.14	5.41	0.06	1.06	0.06	0.33	4,012
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.82	0.67	0.00	1.04	0.00	0.24	1,004
Vendor	0.03	0.99	0.01	0.19	0.01	0.06	664
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2029) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.97	8.58	0.28	0.28	0.25	0.25	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.97	8.58	0.28	0.28	0.25	0.25	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.69	6.13	0.20	0.20	0.18	0.18	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.13	1.12	0.04	0.04	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	10.6	7.43	0.00	14.8	0.00	3.47	14,746

Vendor	0.35	12.5	0.14	2.73	0.14	0.85	9,656
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	10.7	9.10	0.00	14.8	0.00	3.47	14,668
Vendor	0.34	13.0	0.14	2.73	0.14	0.85	9,643
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	7.56	5.74	0.00	10.0	0.00	2.34	10,522
Vendor	0.25	9.09	0.10	1.87	0.10	0.59	6,891
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.38	1.05	0.00	1.83	0.00	0.43	1,742
Vendor	0.05	1.66	0.02	0.34	0.02	0.11	1,141
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2029) - Mitigated

Location	ROG	NOx		PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.97	8.58	0.28	0.28	0.25	0.25	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.97	8.58	0.28	0.28	0.25	0.25	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.69	6.13	0.20	0.20	0.18	0.18	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.13	1.12	0.04	0.04	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	10.6	7.43	0.00	14.8	0.00	3.47	14,746
Vendor	0.35	12.5	0.14	2.73	0.14	0.85	9,656
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	10.7	9.10	0.00	14.8	0.00	3.47	14,668
Vendor	0.34	13.0	0.14	2.73	0.14	0.85	9,643
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	7.56	5.74	0.00	10.0	0.00	2.34	10,522
Vendor	0.25	9.09	0.10	1.87	0.10	0.59	6,891
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.38	1.05	0.00	1.83	0.00	0.43	1,742
Vendor	0.05	1.66	0.02	0.34	0.02	0.11	1,141
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2030) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.94	8.39	0.26	0.26	0.24	0.24	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.94	8.39	0.26	0.26	0.24	0.24	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.67	5.99	0.19	0.19	0.17	0.17	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.09	0.03	0.03	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Vorker	9.69	6.87	0.00	14.8	0.00	3.47	14,509
/endor	0.35	11.9	0.14	2.73	0.14	0.85	9,355
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.89	8.08	0.00	14.8	0.00	3.47	14,435
Vendor	0.33	12.4	0.14	2.73	0.14	0.85	9,345
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Vorker	6.96	5.31	0.00	10.0	0.00	2.34	10,353
/endor	0.25	8.59	0.10	1.87	0.10	0.59	6,677
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	<u> </u>	_	_	_	_	_
Vorker	1.27	0.97	0.00	1.83	0.00	0.43	1,714
/endor	0.05	1.57	0.02	0.34	0.02	0.11	1,105
	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2030) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.94	8.39	0.26	0.26	0.24	0.24	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.94	8.39	0.26	0.26	0.24	0.24	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.67	5.99	0.19	0.19	0.17	0.17	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.09	0.03	0.03	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	9.69	6.87	0.00	14.8	0.00	3.47	14,509
Vendor	0.35	11.9	0.14	2.73	0.14	0.85	9,355
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.89	8.08	0.00	14.8	0.00	3.47	14,435
Vendor	0.33	12.4	0.14	2.73	0.14	0.85	9,345
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.96	5.31	0.00	10.0	0.00	2.34	10,353
Vendor	0.25	8.59	0.10	1.87	0.10	0.59	6,677
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_
Worker	1.27	0.97	0.00	1.83	0.00	0.43	1,714
Vendor	0.05	1.57	0.02	0.34	0.02	0.11	1,105
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2031) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.92	8.12	0.24	0.24	0.22	0.22	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.92	8.12	0.24	0.24	0.22	0.22	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.66	5.80	0.17	0.17	0.16	0.16	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.06	0.03	0.03	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	9.26	6.31	0.00	14.8	0.00	3.47	14,267
Vendor	0.35	11.3	0.14	2.73	0.07	0.78	9,050
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.40	7.48	0.00	14.8	0.00	3.47	14,197

Vendor	0.33	11.9	0.14	2.73	0.07	0.78	9,041
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.65	4.91	0.00	10.0	0.00	2.34	10,182
Vendor	0.24	8.19	0.10	1.87	0.05	0.54	6,460
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.21	0.90	0.00	1.83	0.00	0.43	1,686
Vendor	0.04	1.50	0.02	0.34	0.01	0.10	1,069
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Building Construction (2031) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.92	8.12	0.24	0.24	0.22	0.22	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.92	8.12	0.24	0.24	0.22	0.22	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.66	5.80	0.17	0.17	0.16	0.16	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.06	0.03	0.03	0.03	0.03	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_

Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	9.26	6.31	0.00	14.8	0.00	3.47	14,267
Vendor	0.35	11.3	0.14	2.73	0.07	0.78	9,050
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.40	7.48	0.00	14.8	0.00	3.47	14,197
Vendor	0.33	11.9	0.14	2.73	0.07	0.78	9,041
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.65	4.91	0.00	10.0	0.00	2.34	10,182
Vendor	0.24	8.19	0.10	1.87	0.05	0.54	6,460
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.21	0.90	0.00	1.83	0.00	0.43	1,686
Vendor	0.04	1.50	0.02	0.34	0.01	0.10	1,069
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2032) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.90	7.87	0.22	0.22	0.21	0.21	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.90	7.87	0.22	0.22	0.21	0.21	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_

Off-Road Equipment	0.64	5.64	0.16	0.16	0.15	0.15	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.03	0.03	0.03	0.03	0.03	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.87	5.75	0.00	14.8	0.00	3.47	14,048
Vendor	0.28	10.8	0.07	2.66	0.07	0.78	8,770
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.01	6.46	0.00	14.8	0.00	3.47	13,980
Vendor	0.26	11.3	0.07	2.66	0.07	0.78	8,764
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.39	4.19	0.00	10.0	0.00	2.35	10,053
Vendor	0.19	7.88	0.05	1.82	0.05	0.54	6,278
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.17	0.76	0.00	1.83	0.00	0.43	1,664
Vendor	0.03	1.44	0.01	0.33	0.01	0.10	1,039
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Building Construction (2032) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_

Off-Road Equipment	0.90	7.87	0.22	0.22	0.21	0.21	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.90	7.87	0.22	0.22	0.21	0.21	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.64	5.64	0.16	0.16	0.15	0.15	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.12	1.03	0.03	0.03	0.03	0.03	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.87	5.75	0.00	14.8	0.00	3.47	14,048
Vendor	0.28	10.8	0.07	2.66	0.07	0.78	8,770
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	9.01	6.46	0.00	14.8	0.00	3.47	13,980
Vendor	0.26	11.3	0.07	2.66	0.07	0.78	8,764
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.39	4.19	0.00	10.0	0.00	2.35	10,053
Vendor	0.19	7.88	0.05	1.82	0.05	0.54	6,278
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.17	0.76	0.00	1.83	0.00	0.43	1,664
Vendor	0.03	1.44	0.01	0.33	0.01	0.10	1,039
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction (2033) - Unmitigated

Location	ROG	NOx	PM10E	or daily, MT/yr for a	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.88	7.67	0.20	0.20	0.19	0.19	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.88	7.67	0.20	0.20	0.19	0.19	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.63	5.48	0.15	0.15	0.13	0.13	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	1.00	0.03	0.03	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.53	5.19	0.00	14.8	0.00	3.47	13,828
Vendor	0.27	10.4	0.07	2.66	0.07	0.78	8,477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	8.67	5.90	0.00	14.8	0.00	3.47	13,779
Vendor	0.25	10.9	0.07	2.66	0.07	0.78	8,473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.16	3.81	0.00	10.0	0.00	2.34	9,881
Vendor	0.18	7.56	0.05	1.82	0.05	0.54	6,052

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.12	0.70	0.00	1.83	0.00	0.43	1,636
Vendor	0.03	1.38	0.01	0.33	0.01	0.10	1,002
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Building Construction (2033) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.88	7.67	0.20	0.20	0.19	0.19	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.88	7.67	0.20	0.20	0.19	0.19	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.63	5.48	0.15	0.15	0.13	0.13	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	1.00	0.03	0.03	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.53	5.19	0.00	14.8	0.00	3.47	13,828
Vendor	0.27	10.4	0.07	2.66	0.07	0.78	8,477
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_

Worker	8.67	5.90	0.00	14.8	0.00	3.47	13,779
Vendor	0.25	10.9	0.07	2.66	0.07	0.78	8,473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	6.16	3.81	0.00	10.0	0.00	2.34	9,881
Vendor	0.18	7.56	0.05	1.82	0.05	0.54	6,052
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.12	0.70	0.00	1.83	0.00	0.43	1,636
Vendor	0.03	1.38	0.01	0.33	0.01	0.10	1,002
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction (2034) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.86	7.52	0.19	0.19	0.18	0.18	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.86	7.52	0.19	0.19	0.18	0.18	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.62	5.37	0.14	0.14	0.13	0.13	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.98	0.03	0.03	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.14	4.68	0.00	14.8	0.00	3.47	13,630
Vendor	0.27	10.0	0.07	2.66	0.07	0.78	8,209
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.87	5.34	0.00	14.8	0.00	3.47	13,583
Vendor	0.25	10.5	0.07	2.66	0.07	0.78	8,209
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.85	3.42	0.00	10.0	0.00	2.34	9,740
Vendor	0.18	7.27	0.05	1.82	0.05	0.54	5,863
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.07	0.62	0.00	1.83	0.00	0.43	1,613
Vendor	0.03	1.33	0.01	0.33	0.01	0.10	971
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Building Construction (2034) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.86	7.52	0.19	0.19	0.18	0.18	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.86	7.52	0.19	0.19	0.18	0.18	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.62	5.37	0.14	0.14	0.13	0.13	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.98	0.03	0.03	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	8.14	4.68	0.00	14.8	0.00	3.47	13,630
Vendor	0.27	10.0	0.07	2.66	0.07	0.78	8,209
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.87	5.34	0.00	14.8	0.00	3.47	13,583
Vendor	0.25	10.5	0.07	2.66	0.07	0.78	8,209
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.85	3.42	0.00	10.0	0.00	2.34	9,740
Vendor	0.18	7.27	0.05	1.82	0.05	0.54	5,863
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	1.07	0.62	0.00	1.83	0.00	0.43	1,613
Vendor	0.03	1.33	0.01	0.33	0.01	0.10	971
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction (2035) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_

Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.85	7.34	0.18	0.18	0.17	0.17	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.85	7.34	0.18	0.18	0.17	0.17	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.61	5.24	0.13	0.13	0.12	0.12	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.96	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.58	4.13	0.00	14.8	0.00	3.47	13,445
Vendor	0.27	9.62	0.07	2.66	0.07	0.78	7,936
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.73	5.29	0.00	14.8	0.00	3.47	13,403
Vendor	0.25	10.1	0.07	2.66	0.07	0.78	7,938
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.42	3.38	0.00	10.0	0.00	2.34	9,610
Vendor	0.18	7.00	0.05	1.82	0.05	0.54	5,667
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.99	0.62	0.00	1.83	0.00	0.43	1,591
Vendor	0.03	1.28	0.01	0.33	0.01	0.10	938

Hauling	0.00	0.00	10.00	0.00	0.00	0.00	0.00
riading	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Building Construction (2035) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.85	7.34	0.18	0.18	0.17	0.17	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.85	7.34	0.18	0.18	0.17	0.17	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.61	5.24	0.13	0.13	0.12	0.12	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.96	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.58	4.13	0.00	14.8	0.00	3.47	13,445
Vendor	0.27	9.62	0.07	2.66	0.07	0.78	7,936
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.73	5.29	0.00	14.8	0.00	3.47	13,403
Vendor	0.25	10.1	0.07	2.66	0.07	0.78	7,938
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_

Worker	5.42	3.38	0.00	10.0	0.00	2.34	9,610
Vendor	0.18	7.00	0.05	1.82	0.05	0.54	5,667
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.99	0.62	0.00	1.83	0.00	0.43	1,591
Vendor	0.03	1.28	0.01	0.33	0.01	0.10	938
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Building Construction (2036) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.83	7.12	0.17	0.17	0.16	0.16	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.83	7.12	0.17	0.17	0.16	0.16	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.60	5.10	0.12	0.12	0.11	0.11	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.93	0.02	0.02	0.02	0.02	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.39	4.08	0.00	14.8	0.00	3.47	13,271
Vendor	0.27	9.29	0.07	2.66	0.07	0.78	7,704

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.49	4.78	0.00	14.8	0.00	3.47	13,230
Vendor	0.25	9.80	0.07	2.66	0.07	0.78	7,707
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.33	2.99	0.00	10.0	0.00	2.35	9,501
Vendor	0.19	6.77	0.05	1.82	0.05	0.54	5,517
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.97	0.55	0.00	1.83	0.00	0.43	1,573
Vendor	0.03	1.24	0.01	0.33	0.01	0.10	913
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.26. Building Construction (2036) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.83	7.12	0.17	0.17	0.16	0.16	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.83	7.12	0.17	0.17	0.16	0.16	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.60	5.10	0.12	0.12	0.11	0.11	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_

Off-Road Equipment	0.11	0.93	0.02	0.02	0.02	0.02	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.39	4.08	0.00	14.8	0.00	3.47	13,271
Vendor	0.27	9.29	0.07	2.66	0.07	0.78	7,704
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.49	4.78	0.00	14.8	0.00	3.47	13,230
Vendor	0.25	9.80	0.07	2.66	0.07	0.78	7,707
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.33	2.99	0.00	10.0	0.00	2.35	9,501
Vendor	0.19	6.77	0.05	1.82	0.05	0.54	5,517
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.97	0.55	0.00	1.83	0.00	0.43	1,573
Vendor	0.03	1.24	0.01	0.33	0.01	0.10	913
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Building Construction (2037) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.82	6.99	0.16	0.16	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_

Off-Road Equipment	0.82	6.99	0.16	0.16	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.58	4.99	0.11	0.11	0.10	0.10	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.91	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.10	3.57	0.00	14.8	0.00	3.47	13,111
Vendor	0.27	9.03	0.07	2.66	0.07	0.78	7,473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.24	4.22	0.00	14.8	0.00	3.47	13,074
Vendor	0.25	9.48	0.07	2.66	0.07	0.78	7,479
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.10	2.95	0.00	10.0	0.00	2.34	9,362
Vendor	0.18	6.57	0.05	1.82	0.05	0.54	5,338
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.93	0.54	0.00	1.83	0.00	0.43	1,550
Vendor	0.03	1.20	0.01	0.33	0.01	0.10	884
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.28. Building Construction (2037) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.82	6.99	0.16	0.16	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.82	6.99	0.16	0.16	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.58	4.99	0.11	0.11	0.10	0.10	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.91	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	7.10	3.57	0.00	14.8	0.00	3.47	13,111
Vendor	0.27	9.03	0.07	2.66	0.07	0.78	7,473
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	7.24	4.22	0.00	14.8	0.00	3.47	13,074
Vendor	0.25	9.48	0.07	2.66	0.07	0.78	7,479
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	5.10	2.95	0.00	10.0	0.00	2.34	9,362
Vendor	0.18	6.57	0.05	1.82	0.05	0.54	5,338
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_

Worker	0.93	0.54	0.00	1.83	0.00	0.43	1,550
Vendor	0.03	1.20	0.01	0.33	0.01	0.10	884
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Building Construction (2038) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.81	6.89	0.15	0.15	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.81	6.89	0.15	0.15	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.58	4.92	0.11	0.11	0.10	0.10	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.90	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	6.86	3.52	0.00	14.8	0.00	3.47	12,824
Vendor	0.27	8.78	0.07	2.66	0.07	0.78	7,282
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	6.95	4.17	0.00	14.8	0.00	3.47	12,912
Vendor	0.25	9.23	0.07	2.66	0.07	0.78	7,286

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	4.86	2.58	0.00	10.0	0.00	2.34	9,256
Vendor	0.19	6.39	0.05	1.82	0.05	0.54	5,202
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.89	0.47	0.00	1.83	0.00	0.43	1,532
Vendor	0.03	1.17	0.01	0.33	0.01	0.10	861
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.30. Building Construction (2038) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.81	6.89	0.15	0.15	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.81	6.89	0.15	0.15	0.14	0.14	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.58	4.92	0.11	0.11	0.10	0.10	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.11	0.90	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_

Worker	6.86	3.52	0.00	14.8	0.00	3.47	12,824
Vendor	0.27	8.78	0.07	2.66	0.07	0.78	7,282
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	6.95	4.17	0.00	14.8	0.00	3.47	12,912
Vendor	0.25	9.23	0.07	2.66	0.07	0.78	7,286
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	4.86	2.58	0.00	10.0	0.00	2.34	9,256
Vendor	0.19	6.39	0.05	1.82	0.05	0.54	5,202
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.89	0.47	0.00	1.83	0.00	0.43	1,532
Vendor	0.03	1.17	0.01	0.33	0.01	0.10	861
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Building Construction (2039) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.78	0.15	0.15	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.78	0.15	0.15	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.57	4.84	0.10	0.10	0.10	0.10	1,718

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.10	0.88	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	6.42	3.01	0.00	14.8	0.00	3.47	12,685
Vendor	0.28	8.61	0.07	2.66	0.07	0.78	7,108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	6.47	3.66	0.00	14.8	0.00	3.47	12,777
Vendor	0.25	9.05	0.07	2.66	0.07	0.78	7,113
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	4.59	2.22	0.00	10.0	0.00	2.34	9,060
Vendor	0.19	6.27	0.05	1.82	0.05	0.54	5,078
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.84	0.40	0.00	1.83	0.00	0.43	1,500
Vendor	0.03	1.14	0.01	0.33	0.01	0.10	841
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.32. Building Construction (2039) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.78	0.15	0.15	0.13	0.13	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.78	0.15	0.15	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.57	4.84	0.10	0.10	0.10	0.10	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.10	0.88	0.02	0.02	0.02	0.02	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	6.42	3.01	0.00	14.8	0.00	3.47	12,685
Vendor	0.28	8.61	0.07	2.66	0.07	0.78	7,108
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	6.47	3.66	0.00	14.8	0.00	3.47	12,777
Vendor	0.25	9.05	0.07	2.66	0.07	0.78	7,113
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	4.59	2.22	0.00	10.0	0.00	2.34	9,060
Vendor	0.19	6.27	0.05	1.82	0.05	0.54	5,078
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.84	0.40	0.00	1.83	0.00	0.43	1,500
Vendor	0.03	1.14	0.01	0.33	0.01	0.10	841
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.33. Building Construction (2040) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.71	0.14	0.14	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.71	0.14	0.14	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.18	1.54	0.03	0.03	0.03	0.03	551
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.03	0.28	0.01	0.01	0.01	0.01	91.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	6.03	2.96	0.00	14.8	0.00	3.47	12,561
Vendor	0.28	8.42	0.07	2.66	0.07	0.78	6,927
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	6.13	3.62	0.00	14.8	0.00	3.47	12,516
Vendor	0.25	8.80	0.07	2.66	0.07	0.78	6,933
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	1.38	0.70	0.00	3.21	0.00	0.75	2,876
Vendor	0.06	1.95	0.02	0.58	0.02	0.17	1,586

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.25	0.13	0.00	0.59	0.00	0.14	476
Vendor	0.01	0.36	< 0.005	0.11	< 0.005	0.03	263
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.34. Building Construction (2040) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.71	0.14	0.14	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.80	6.71	0.14	0.14	0.13	0.13	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.18	1.54	0.03	0.03	0.03	0.03	551
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.03	0.28	0.01	0.01	0.01	0.01	91.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	6.03	2.96	0.00	14.8	0.00	3.47	12,561
Vendor	0.28	8.42	0.07	2.66	0.07	0.78	6,927
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_

Worker	6.13	3.62	0.00	14.8	0.00	3.47	12,516
Vendor	0.25	8.80	0.07	2.66	0.07	0.78	6,933
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	1.38	0.70	0.00	3.21	0.00	0.75	2,876
Vendor	0.06	1.95	0.02	0.58	0.02	0.17	1,586
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.25	0.13	0.00	0.59	0.00	0.14	476
Vendor	0.01	0.36	< 0.005	0.11	< 0.005	0.03	263
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.35. Paving (2040) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.49	5.27	0.11	0.11	0.10	0.10	1,516
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.49	5.27	0.11	0.11	0.10	0.10	1,516
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.24	2.57	0.05	0.05	0.05	0.05	739
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.04	0.47	0.01	0.01	0.01	0.01	122
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	0.04	0.02	0.00	0.10	0.00	0.02	85.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.04	0.02	0.00	0.10	0.00	0.02	85.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.02	0.01	0.00	0.05	0.00	0.01	41.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	0.01	0.00	< 0.005	6.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.36. Paving (2040) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.49	5.27	0.11	0.11	0.10	0.10	1,516

Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.49	5.27	0.11	0.11	0.10	0.10	1,516
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.24	2.57	0.05	0.05	0.05	0.05	739
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.04	0.47	0.01	0.01	0.01	0.01	122
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	0.04	0.02	0.00	0.10	0.00	0.02	85.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.04	0.02	0.00	0.10	0.00	0.02	85.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.02	0.01	0.00	0.05	0.00	0.01	41.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_

Worker	< 0.005	< 0.005	0.00	0.01	0.00	< 0.005	6.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.37. Paving (2041) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.48	5.20	0.10	0.10	0.09	0.09	1,516
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.06	0.61	0.01	0.01	0.01	0.01	178
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.01	0.11	< 0.005	< 0.005	< 0.005	< 0.005	29.5
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	0.04	0.02	0.00	0.10	0.00	0.02	84.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_

Worker	< 0.005	< 0.005	0.00	0.01	0.00	< 0.005	9.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	1.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.38. Paving (2041) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.48	5.20	0.10	0.10	0.09	0.09	1,516
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.06	0.61	0.01	0.01	0.01	0.01	178
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.01	0.11	< 0.005	< 0.005	< 0.005	< 0.005	29.5
Paving	0.00	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_

Worker	0.04	0.02	0.00	0.10	0.00	0.02	84.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	0.01	0.00	< 0.005	9.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	1.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.39. Architectural Coating (2041) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134
Architectural Coatings	460	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134
Architectural Coatings	460	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.05	0.44	< 0.005	< 0.005	< 0.005	< 0.005	80.0
Architectural Coatings	275	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.01	0.08	< 0.005	< 0.005	< 0.005	< 0.005	13.2
Architectural Coatings	50.1	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	1.15	0.49	0.00	2.96	0.00	0.69	2,489
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	1.17	0.62	0.00	2.96	0.00	0.69	2,481
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.69	0.36	0.00	1.67	0.00	0.39	1,486
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	0.13	0.07	0.00	0.31	0.00	0.07	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.40. Architectural Coating (2041) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134

Architectural Coatings	460	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134
Architectural Coatings			_		< 0.003		
_		_		_	0.00	0.00	0.00
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	0.05	0.44	< 0.005	< 0.005	< 0.005	< 0.005	80.0
Architectural Coatings	275	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	0.01	0.08	< 0.005	< 0.005	< 0.005	< 0.005	13.2
Architectural Coatings	50.1	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Worker	1.15	0.49	0.00	2.96	0.00	0.69	2,489
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	1.17	0.62	0.00	2.96	0.00	0.69	2,481
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.69	0.36	0.00	1.67	0.00	0.39	1,486
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_

Worker	0.13	0.07	0.00	0.31	0.00	0.07	246
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.41. Architectural Coating (2042) - Unmitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134
Architectural Coatings	460	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	1.05
Architectural Coatings	3.60	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Architectural Coatings	0.66	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Worker	1.03	0.61	0.00	2.96	0.00	0.69	2,460
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_

Worker	0.01	< 0.005	0.00	0.02	0.00	0.01	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.42. Architectural Coating (2042) - Mitigated

Location	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Onsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Off-Road Equipment	0.09	0.74	< 0.005	< 0.005	< 0.005	< 0.005	134
Architectural Coatings	460	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Off-Road Equipment	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	1.05
Architectural Coatings	3.60	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.17
Architectural Coatings	0.66	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_

Worker	1.03	0.61	0.00	2.96	0.00	0.69	2,460
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_
Worker	0.01	< 0.005	0.00	0.02	0.00	0.01	19.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	3.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	1.31	0.71	0.01	1.70	0.01	0.44	1,581
Apartments Mid Rise	33.1	17.9	0.21	43.0	0.19	11.0	39,977
Strip Mall	70.7	39.2	0.47	97.1	0.44	25.0	90,060
General Office Building	6.66	3.70	0.04	9.15	0.04	2.35	8,482
Total	112	61.6	0.72	151	0.68	38.8	140,101
Daily, Winter (Max)	_	_	_	_	_	_	_

Retirement Community	1.33	0.79	0.01	1.70	0.01	0.44	1,580
Apartments Mid Rise	33.6	20.0	0.21	43.0	0.20	11.0	39,964
Strip Mall	71.9	43.9	0.47	97.1	0.44	25.0	90,020
General Office Building	6.77	4.13	0.04	9.15	0.04	2.35	8,479
Total	114	68.8	0.73	151	0.68	38.8	140,043
Annual	_	_	_	_	_	_	_
Retirement Community	0.23	0.13	< 0.005	0.28	< 0.005	0.07	249
Apartments Mid Rise	5.77	3.26	0.04	7.07	0.03	1.82	6,299
Strip Mall	11.9	6.88	0.08	15.4	0.07	3.96	13,667
General Office Building	0.93	0.54	0.01	1.20	0.01	0.31	1,064
Total	18.8	10.8	0.12	23.9	0.11	6.16	21,279

4.1.2. Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	1.22	0.66	0.01	1.59	0.01	0.41	1,480
Apartments Mid Rise	31.0	16.8	0.19	40.2	0.18	10.3	37,419
Strip Mall	66.2	36.7	0.44	90.9	0.41	23.4	84,296
General Office Building	6.23	3.46	0.04	8.56	0.04	2.20	7,939
Total	105	57.6	0.68	141	0.64	36.3	131,134
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	1.25	0.74	0.01	1.59	0.01	0.41	1,479
Apartments Mid Rise	31.5	18.8	0.19	40.2	0.18	10.3	37,406

Strip Mall	67.3	41.1	0.44	90.9	0.41	23.4	84,259
General Office Building	6.34	3.87	0.04	8.56	0.04	2.20	7,936
Total	106	64.4	0.68	141	0.64	36.3	131,081
Annual	_	_	_	_	_	_	_
Retirement Community	0.21	0.12	< 0.005	0.26	< 0.005	0.07	233
Apartments Mid Rise	5.40	3.05	0.03	6.61	0.03	1.70	5,896
Strip Mall	11.1	6.44	0.07	14.4	0.07	3.71	12,792
General Office Building	0.87	0.50	0.01	1.12	0.01	0.29	996
Total	17.6	10.1	0.11	22.4	0.11	5.76	19,917

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Land Use	ROG			PM10T		PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	422
Apartments Mid Rise	_	_	_	_	_	_	4,382
Strip Mall	_	_	_	_	_	_	2,982
General Office Building	_	_	_	_	_	_	3,226
Total	_	_	_	_	_	_	11,012
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	422
Apartments Mid Rise	_	_	_	_	_	_	4,382
Strip Mall	_	_	_	_	_	_	2,982

General Office Building	_	_	_	_	_	_	3,226
Total	_	_	_	_	_	_	11,012
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	69.9
Apartments Mid Rise	_	_	_	_	_	_	726
Strip Mall	_	_	_	_	_	_	494
General Office Building	_	_	_	_	_	_	534
Total	_	_	_	_	_	_	1,823

4.2.2. Electricity Emissions By Land Use - Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	422
Apartments Mid Rise	_	_	_	_	_	_	4,382
Strip Mall	_	_	_	_	_	_	2,982
General Office Building	_	_	_	_	_	_	3,226
Total	_	_	_	_	_	_	11,012
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	422
Apartments Mid Rise	_	_	_	_	_	_	4,382
Strip Mall	_	_	_	_	_	_	2,982
General Office Building	_	_	_	_	_	_	3,226
Total	_	_	_	_	_	_	11,012

Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	69.9
Apartments Mid Rise	_	_	_	_	_	_	726
Strip Mall	_	_	_	_	_	_	494
General Office Building	_	_	_	_	_	_	534
Total	_	_	_	_	_	_	1,823

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

	<u> </u>						
Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	0.05	0.89	0.07	0.07	0.07	0.07	1,129
Apartments Mid Rise	0.40	6.90	0.56	0.56	0.56	0.56	8,778
Strip Mall	0.06	1.09	0.08	0.08	0.08	0.08	1,307
General Office Building	0.09	1.70	0.13	0.13	0.13	0.13	2,032
Total	0.61	10.6	0.84	0.84	0.84	0.84	13,246
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	0.05	0.89	0.07	0.07	0.07	0.07	1,129
Apartments Mid Rise	0.40	6.90	0.56	0.56	0.56	0.56	8,778
Strip Mall	0.06	1.09	0.08	0.08	0.08	0.08	1,307
General Office Building	0.09	1.70	0.13	0.13	0.13	0.13	2,032
Total	0.61	10.6	0.84	0.84	0.84	0.84	13,246
Annual	_	_	_	_	_	_	_
Retirement Community	0.01	0.16	0.01	0.01	0.01	0.01	187

Apartments Mid Rise	0.07	1.26	0.10	0.10	0.10	0.10	1,453
Strip Mall	0.01	0.20	0.02	0.02	0.02	0.02	216
General Office Building	0.02	0.31	0.02	0.02	0.02	0.02	336
Total	0.11	1.93	0.15	0.15	0.15	0.15	2,193

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	0.05	0.89	0.07	0.07	0.07	0.07	1,129
Apartments Mid Rise	0.40	6.90	0.56	0.56	0.56	0.56	8,778
Strip Mall	0.06	1.09	0.08	0.08	0.08	0.08	1,307
General Office Building	0.09	1.70	0.13	0.13	0.13	0.13	2,032
Total	0.61	10.6	0.84	0.84	0.84	0.84	13,246
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	0.05	0.89	0.07	0.07	0.07	0.07	1,129
Apartments Mid Rise	0.40	6.90	0.56	0.56	0.56	0.56	8,778
Strip Mall	0.06	1.09	0.08	0.08	0.08	0.08	1,307
General Office Building	0.09	1.70	0.13	0.13	0.13	0.13	2,032
Total	0.61	10.6	0.84	0.84	0.84	0.84	13,246
Annual	_	_	_	_	_	_	_
Retirement Community	0.01	0.16	0.01	0.01	0.01	0.01	187
Apartments Mid Rise	0.07	1.26	0.10	0.10	0.10	0.10	1,453
Strip Mall	0.01	0.20	0.02	0.02	0.02	0.02	216

General Office Building	0.02	0.31	0.02	0.02	0.02	0.02	336
Total	0.11	1.93	0.15	0.15	0.15	0.15	2,193

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

	\	,	`	·· •.•,,,	/		
Source	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Hearths	4,054	79.2	690	690	687	687	107,555
Consumer Products	74.3	_	_	_	_	_	_
Architectural Coatings	27.7	_	_	_	_	_	_
Landscape Equipment	19.5	1.72	0.14	0.14	0.10	0.10	566
Total	4,176	80.9	690	690	687	687	108,121
Daily, Winter (Max)	_	_	_	_	_	_	_
Hearths	4,054	79.2	690	690	687	687	107,555
Consumer Products	74.3	_	_	_	_	_	_
Architectural Coatings	27.7	_	_	_	_	_	_
Total	4,156	79.2	690	690	687	687	107,555
Annual	_	_	_	_	_	_	_
Hearths	166	3.25	28.3	28.3	28.1	28.1	4,000
Consumer Products	13.6	_	_	_	_	_	_
Architectural Coatings	5.06	_	_	_	_	_	_
Landscape Equipment	1.76	0.15	0.01	0.01	0.01	0.01	46.2
Total	187	3.40	28.3	28.3	28.2	28.2	4,047

4.3.2. Mitigated

Source	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Hearths	4,054	79.2	690	690	687	687	107,555
Consumer Products	74.3	_	_	_	_	_	_
Architectural Coatings	27.7	_	_	_	_	_	_
Landscape Equipment	19.5	1.72	0.14	0.14	0.10	0.10	566
Total	4,176	80.9	690	690	687	687	108,121
Daily, Winter (Max)	_	_	_	_	_	_	_
Hearths	4,054	79.2	690	690	687	687	107,555
Consumer Products	74.3	_	_	_	_	_	_
Architectural Coatings	27.7	_	_	_	_	_	_
Total	4,156	79.2	690	690	687	687	107,555
Annual	_	_	_	_	_	_	_
Hearths	166	3.25	28.3	28.3	28.1	28.1	4,000
Consumer Products	13.6	_	_	_	_	_	_
Architectural Coatings	5.06	_	_	_	_	_	_
Landscape Equipment	1.76	0.15	0.01	0.01	0.01	0.01	46.2
Total	187	3.40	28.3	28.3	28.2	28.2	4,047

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	66.3
Apartments Mid Rise	_	_	_	_	_	_	740
Strip Mall	_	_	_	_	_	_	503

General Office Building	_	_	_	_	_	_	517
Total	_	_	_	_	_	_	1,826
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	66.3
Apartments Mid Rise	_	_	_	_	_	_	740
Strip Mall	_	_	_	_	_	_	503
General Office Building	_	_	_	_	_	_	517
Total	_	_	_	_	_	_	1,826
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	11.0
Apartments Mid Rise	_	_	_	_	_	_	122
Strip Mall	_	_	_	_	_	_	83.3
General Office Building	_	_	_	_	_	_	85.7
Total	_	_	_	_	_	_	302

4.4.2. Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	66.3
Apartments Mid Rise	_	_	_	_	_	_	740
Strip Mall	_	_	_	_	_	_	503
General Office Building	_	_	_	_	_	_	517
Total	_	_	_	_	_	_	1,826

Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	66.3
Apartments Mid Rise	_	_	_	_	_	_	740
Strip Mall	_	_	_	_	_	_	503
General Office Building	_	_	_	_	_	_	517
Total	_	_	_	_	_	_	1,826
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	11.0
Apartments Mid Rise	_	_	_	_	_	_	122
Strip Mall	_	_	_	_	_	_	83.3
General Office Building	_	_	_	_	_	_	85.7
Total	_	_	_	_	_	_	302

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e	
Daily, Summer (Max)	_	_	_	_	_	_	_	
Retirement Community	_	_	_	_	_	_	845	
Apartments Mid Rise	_	_	_	_	_	_	3,391	
Strip Mall	_	_	_	_	_	_	1,253	
General Office Building	_	_	_	_	_	_	476	
Total	_	_	_	_	_	_	5,965	
Daily, Winter (Max)	_	_	_	_	_	_	_	

Retirement Community	_	_	_	_	_	_	845
Apartments Mid Rise	_	_	_	_	_	_	3,391
Strip Mall	_	_	_	_	_	_	1,253
General Office Building	_	_	_	_	_	_	476
Total	_	_	_	_	_	_	5,965
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	140
Apartments Mid Rise	_	_	_	_	_	_	561
Strip Mall	_	_	_	_	_	_	207
General Office Building	_	_	_	_	_	_	78.7
Total	_	_	_	_	_	_	987

4.5.2. Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	845
Apartments Mid Rise	_	_	_	_	_	_	3,391
Strip Mall	_	_	_	_	_	_	1,253
General Office Building	_	_	_	_	_	_	476
Total	_	_	_	_	_	_	5,965
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	845
Apartments Mid Rise	_	_	_	_	_	_	3,391

Strip Mall	_	_	_	_	_	_	1,253
General Office Building	_	_	_	_	_	_	476
Total	_	_	_	_	_	_	5,965
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	140
Apartments Mid Rise	_	_	_	_	_	_	561
Strip Mall	_	_	_	_	_	_	207
General Office Building	_	_	_	_	_	_	78.7
Total	_	_	_	_	_	_	987

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	2.93
Apartments Mid Rise	_	_	_	_	_	_	16.7
Strip Mall	_	_	_	_	_	_	3.94
General Office Building	_	_	_	_	_	_	0.66
Total	_	_	_	_	_	_	24.3
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	2.93
Apartments Mid Rise	_	_	_	_	_	_	16.7
Strip Mall	_	_	_	_	_	_	3.94

General Office Building	_	_	_	_	_	_	0.66
Total	_	_	_	_	_	_	24.3
Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	0.49
Apartments Mid Rise	_	_	_	_	_	_	2.77
Strip Mall	_	_	_	_	_	_	0.65
General Office Building	_	_	_	_	_	_	0.11
Total	_	_	_	_	_	_	4.02

4.6.2. Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	2.93
Apartments Mid Rise	_	_	_	_	_	_	16.7
Strip Mall	_	_	_	_	_	_	3.94
General Office Building	_	_	_	_	_	_	0.66
Total	_	_	_	_	_	_	24.3
Daily, Winter (Max)	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	2.93
Apartments Mid Rise	_	_	_	_	_	_	16.7
Strip Mall	_	_	_	_	_	_	3.94
General Office Building	_	_	_	_	_	_	0.66
Total	_	_	_	_	_	_	24.3

Annual	_	_	_	_	_	_	_
Retirement Community	_	_	_	_	_	_	0.49
Apartments Mid Rise	_	_	_	_	_	_	2.77
Strip Mall	_	_	_	_	_	_	0.65
General Office Building	_	_	_	_	_	_	0.11
Total	_	_	_	_	_	_	4.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.7.2. Mitigated

Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_

Iotal	-	_	-	_	_	_	_

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

(iii) and (iii)							
Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

(10.10.1 c. 10.10.1 c. 10.1), 10.1 c.								
Vegetation	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e	
Daily, Summer (Max)	_	_	_	_	_	_	_	
Total	_	_	_	_	_	_	_	
Daily, Winter (Max)	_	_	_	_	_	_	_	
Total	_	_	_	_	_	_	_	
Annual	_	_	_	_	_	_	_	

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lotal	-	I —	_	-	 _	_

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

	(J) J)	. ,		· J · · J	/		
Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_

Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Land Use	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_

Total	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Species	ROG	NOx	PM10E	PM10T	PM2.5E	PM2.5T	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
Sequestered	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_

Removed	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_
_	_	_	_	_	_	_	_

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/13/2026	3/30/2027	5.00	120	_
Grading	Grading	3/31/2027	6/7/2028	5.00	310	_
Building Construction	Building Construction	6/8/2028	4/26/2040	5.00	3,100	_
Paving	Paving	4/27/2040	3/1/2041	5.00	220	_
Architectural Coating	Architectural Coating	3/2/2041	1/4/2042	5.00	220	_

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

Paving		Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectu	ral Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	_	_
Site Preparation	Worker	17.5	9.53	LDA,LDT1,LDT2
Site Preparation	Vendor	_	7.16	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	_	_	HHDT
Grading	_	_	_	_
Grading	Worker	20.0	9.53	LDA,LDT1,LDT2
Grading	Vendor	_	7.16	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	_	_	HHDT
Building Construction	_	_	_	_
Building Construction	Worker	2,197	9.53	LDA,LDT1,LDT2
Building Construction	Vendor	431	7.16	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	_	_	HHDT
Paving	_	_	_	_
Paving	Worker	15.0	9.53	LDA,LDT1,LDT2
Paving	Vendor	_	7.16	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	_	_	HHDT
Architectural Coating	_	_	_	_

Architectural Coating	Worker	439	9.53	LDA,LDT1,LDT2
Architectural Coating	Vendor	_	7.16	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	_	_	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	_	_
Site Preparation	Worker	17.5	9.53	LDA,LDT1,LDT2
Site Preparation	Vendor	_	7.16	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	_	_	HHDT
Grading	_	_	_	_
Grading	Worker	20.0	9.53	LDA,LDT1,LDT2
Grading	Vendor	_	7.16	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	_	_	HHDT
Building Construction	_	_	_	_
Building Construction	Worker	2,197	9.53	LDA,LDT1,LDT2
Building Construction	Vendor	431	7.16	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	_	_	HHDT
Paving	_	_	_	_
Paving	Worker	15.0	9.53	LDA,LDT1,LDT2
Paving	Vendor	_	7.16	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	_	_	HHDT
Architectural Coating	_	_	_	_

Architectural Coating	Worker	439	9.53	LDA,LDT1,LDT2
Architectural Coating	Vendor	_	7.16	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	_	_	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	5,195,745	1,731,915	1,356,000	452,000	_

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	_	_	180	0.00	_
Grading	_	_	930	0.00	_
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Retirement Community	_	0%

Apartments Mid Rise	_	0%
Strip Mall	0.00	0%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

	(10.111)				
Year	kWh per Year	CO2	CH4	N2O	
2026	0.00	204	0.03	< 0.005	
2027	0.00	204	0.03	< 0.005	
2028	0.00	204	0.03	< 0.005	
2029	0.00	204	0.03	< 0.005	
2030	0.00	204	0.03	< 0.005	
2031	0.00	204	0.03	< 0.005	
2032	0.00	204	0.03	< 0.005	
2033	0.00	204	0.03	< 0.005	
2034	0.00	204	0.03	< 0.005	
2035	0.00	204	0.03	< 0.005	
2036	0.00	204	0.03	< 0.005	
2037	0.00	204	0.03	< 0.005	
2038	0.00	204	0.03	< 0.005	
2039	0.00	204	0.03	< 0.005	
2040	0.00	204	0.03	< 0.005	
2041	0.00	204	0.03	< 0.005	
2042	0.00	204	0.03	< 0.005	

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Retirement Community	523	443	425	181,647	2,391	2,023	1,943	830,269
Apartments Mid Rise	13,230	11,941	9,947	4,590,574	60,472	54,580	45,465	20,982,513
Strip Mall	28,046	26,603	12,928	9,373,174	136,732	129,698	63,029	45,697,406
General Office Building	2,641	599	190	729,824	12,878	2,922	926	3,558,142

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Retirement Community	490	414	398	170,022	2,238	1,893	1,819	777,131
Apartments Mid Rise	12,383	11,177	9,310	4,296,777	56,602	51,087	42,555	19,639,632
Strip Mall	26,251	24,900	12,101	8,773,291	127,981	121,398	58,995	42,772,772
General Office Building	2,472	561	178	683,116	12,054	2,735	866	3,330,421

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Retirement Community	_
Wood Fireplaces	76
Gas Fireplaces	120
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	22
Conventional Wood Stoves	0
Catalytic Wood Stoves	11
Non-Catalytic Wood Stoves	11
Pellet Wood Stoves	0
Apartments Mid Rise	
Wood Fireplaces	851
Gas Fireplaces	1338
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	243
Conventional Wood Stoves	0
Catalytic Wood Stoves	122
Non-Catalytic Wood Stoves	122
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Retirement Community	_
Wood Fireplaces	76
Gas Fireplaces	120
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	22
Conventional Wood Stoves	0
Catalytic Wood Stoves	11
Non-Catalytic Wood Stoves	11
Pellet Wood Stoves	0

Apartments Mid Rise	_
Wood Fireplaces	851
Gas Fireplaces	1338
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	243
Conventional Wood Stoves	0
Catalytic Wood Stoves	122
Non-Catalytic Wood Stoves	122
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)		Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
5195745	1,731,915	1,356,000	452,000	_

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Retirement Community	747,800	204	0.0330	0.0040	3,513,900
Apartments Mid Rise	7,764,900	204	0.0330	0.0040	27,314,013
Strip Mall	5,282,784	204	0.0330	0.0040	4,066,183
General Office Building	5,715,780	204	0.0330	0.0040	6,322,145

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Retirement Community	747,800	204	0.0330	0.0040	3,513,900
Apartments Mid Rise	7,764,900	204	0.0330	0.0040	27,314,013
Strip Mall	5,282,784	204	0.0330	0.0040	4,066,183
General Office Building	5,715,780	204	0.0330	0.0040	6,322,145

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Retirement Community	6,176,621	0.00
Apartments Mid Rise	68,906,160	0.00
Strip Mall	46,873,092	0.00
General Office Building	48,201,392	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Land Ose	indoor water (gar/year)	Outdoor Water (gar/year)

Retirement Community	6,176,621	0.00
Apartments Mid Rise	68,906,160	0.00
Strip Mall	46,873,092	0.00
General Office Building	48,201,392	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Retirement Community	448	_
Apartments Mid Rise	1,798	_
Strip Mall	664	_
General Office Building	252	_

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Retirement Community	448	_
Apartments Mid Rise	1,798	_
Strip Mall	664	_
General Office Building	252	_

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type Fuel Type Engine Tier Number per Day Hours Per Day Horsepower Load Factor	
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment type Fuel type Inumber per Day Hours per Day Hours per Year Horsepower Load Factor	Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
_qa.po 1)po				Daily Hoat Input (IIII Dia/aay)	/aaaap a (

5.17. User Defined

Equipment Type Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

 Vegetation Land Use Type
 Vegetation Soil Type
 Initial Acres
 Final Acres

5.18.1.2. Mitigated

 Vegetation Land Use Type
 Vegetation Soil Type
 Initial Acres
 Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Initial Acres Final Acres

5.18.1.2. Mitigated

Biomass Cover Type Initial Acres Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type Number Electricity Saved (kWh/year) Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type Tradition (Notifice Type Tradition Cas Saved (blu/year)	Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.30	annual days of extreme heat
Extreme Precipitation	19.1	annual days with precipitation above 20 mm
Sea Level Rise	_	meters of inundation depth
Wildfire	3.58	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract	
Exposure Indicators	_	
AQ-Ozone	0.19	
AQ-PM	4.37	
AQ-DPM	27.6	
Drinking Water	4.42	
Lead Risk Housing	35.2	
Pesticides	0.00	
Toxic Releases	8.34	
Traffic	11.0	
Effect Indicators	_	
CleanUp Sites	0.00	
Groundwater	17.2	
Haz Waste Facilities/Generators	35.6	
Impaired Water Bodies	43.8	
Solid Waste	70.4	
Sensitive Population	_	
Asthma	67.0	
Cardio-vascular	85.2	
Low Birth Weights	12.4	
Socioeconomic Factor Indicators	_	
Education	22.8	
Housing	43.9	
Linguistic	0.00	
Poverty	63.0	
Unemployment	74.7	

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	-
Above Poverty	43.06428846
Employed	63.51854228
Median HI	32.08007186
Education	_
Bachelor's or higher	50.17323239
High school enrollment	100
Preschool enrollment	44.43731554
Transportation	_
Auto Access	59.70742974
Active commuting	17.07943026
Social	_
2-parent households	36.3403054
Voting	59.21981265
Neighborhood	_
Alcohol availability	68.02258437
Park access	39.25317593
Retail density	24.63749519
Supermarket access	32.2340562
Tree canopy	93.63531374
Housing	_
Homeownership	43.3465931
Housing habitability	47.56833055
Low-inc homeowner severe housing cost burden	35.2239189
Low-inc renter severe housing cost burden	55.24188374
Uncrowded housing	56.87155139
Health Outcomes	_

Insured adults	41.85807776
Arthritis	0.0
Asthma ER Admissions	20.1
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	9.2
Cognitively Disabled	2.9
Physically Disabled	16.6
Heart Attack ER Admissions	54.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	61.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	_
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	_
Wildfire Risk	0.0
SLR Inundation Area	51.4
Children	47.4
Elderly	48.7

English Speaking	92.6
Foreign-born	2.8
Outdoor Workers	45.3
Climate Change Adaptive Capacity	_
Impervious Surface Cover	87.5
Traffic Density	6.4
Traffic Access	0.0
Other Indices	_
Hardship	42.4
Other Decision Support	_
2016 Voting	52.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	16.0
Healthy Places Index Score for Project Location (b)	53.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

8. User Changes to Default Data

Screen	Justification
Land Use	Lot acreage for retirement community and mid rise apartments adjusted to match project description and account for mixed use development.
Construction: Construction Phases	Assumed no demolition of existing uses
Operations: Hearths	All electric fireplaces and no wood stoves

APPENDIX # EMFAC2021

McKinleyville Town Center Rezone 2045 Fuel Demand

Valida Olava		5	W1/.1-	I-	D
Vehicle Class	Fuel	Process	Kgal/day	Fuel Type	Demand
All Other Buses	Dsl	IDLEX	3.25E-05	Discol	
All Other Buses	Dsl	RUNEX	0.002624	Diesel	0.76
LDA	Dsl	RUNEX	0.000586	Kgal/day	0.76
LDT1	Dsl	RUNEX	9.83E-07	KGal/yr	275.58
LDT2	Dsl	RUNEX	0.002463		
LHD1	Dsl	IDLEX	0.000309	Gas	
LHD1	Dsl	RUNEX	0.043383	Kgal/day	2.81
LHD2	Dsl	IDLEX	0.000284	KGal/yr	1026.14
LHD2	Dsl	RUNEX	0.027851		
MDV	Dsl	RUNEX	0.006686	Hybrid	
MH	Dsl	RUNEX	0.002062	kgal/day	0.04
Motor Coach	Dsl	IDLEX	0.000236	Kgal/yr	15.93
Motor Coach	Dsl	RUNEX	0.005487		
PTO	Dsl	RUNEX	0.015421	TOTAL	
SBUS	Dsl	IDLEX	0.00043	KGal/yr	1317.66
SBUS	Dsl	RUNEX	0.005007	Gal/yr	1317655.18
T6 CAIRP Class 4	Dsl	IDLEX	4.75E-07		
T6 CAIRP Class 4	Dsl	RUNEX	6.35E-05		
T6 CAIRP Class 5	Dsl	IDLEX	5.85E-07		
T6 CAIRP Class 5	Dsl	RUNEX	8.74E-05	Mileage	
T6 CAIRP Class 6	Dsl	IDLEX	2.64E-06	Check:	
T6 CAIRP Class 6	Dsl	RUNEX	0.000227		
T6 CAIRP Class 7	Dsl	IDLEX	6.66E-06	VMT/yr	39154182.74
T6 CAIRP Class 7	Dsl	RUNEX	0.002284	mpg	29.72
T6 Instate Delivery Class 4	Dsl	IDLEX	7.44E-05		
T6 Instate Delivery Class 4	Dsl	RUNEX	0.001395		
T6 Instate Delivery Class 5	Dsl	IDLEX	4.50E-05		
T6 Instate Delivery Class 5	Dsl	RUNEX	0.000844		
T6 Instate Delivery Class 6	Dsl	IDLEX	0.000111		
T6 Instate Delivery Class 6	Dsl	RUNEX	0.002129		
T6 Instate Delivery Class 7	Dsl	IDLEX	7.61E-05		
T6 Instate Delivery Class 7	Dsl	RUNEX	0.002209		
T6 Instate Other Class 4	Dsl	IDLEX	0.000338		
T6 Instate Other Class 4	Dsl	RUNEX	0.006787		
T6 Instate Other Class 5	Dsl	IDLEX	0.000942		
T6 Instate Other Class 5	Dsl	RUNEX	0.018968		
T6 Instate Other Class 6	Dsl	IDLEX	0.000498		
T6 Instate Other Class 6	Dsl	RUNEX	0.010001		
T6 Instate Other Class 7	Dsl	IDLEX	0.000563		
T6 Instate Other Class 7	Dsl	RUNEX	0.01065		
T6 Instate Tractor Class 6	Dsl	IDLEX	4.99E-06		
T6 Instate Tractor Class 6	Dsl	RUNEX	0.000117		
T6 Instate Tractor Class 7	Dsl	IDLEX	8.26E-05		
	=				

APPENDIX # EMFAC2021

McKinleyville Town Center Rezone 2045 Fuel Demand

T6 Instate Tractor Class 7	Dsl	RUNEX	0.002159
T6 OOS Class 4	Dsl	IDLEX	5.11E-07
T6 OOS Class 4	Dsl	RUNEX	6.98E-05
T6 OOS Class 5	Dsl	IDLEX	6.31E-07
T6 OOS Class 5	Dsl	RUNEX	9.58E-05
T6 OOS Class 6	Dsl	IDLEX	2.83E-06
T6 OOS Class 6	Dsl	RUNEX	0.00025
T6 OOS Class 7	Dsl	IDLEX	3.46E-06
T6 OOS Class 7	Dsl	RUNEX	0.001636
T6 Public Class 4	Dsl	IDLEX	5.93E-05
T6 Public Class 4	Dsl	RUNEX	0.000784
T6 Public Class 5	Dsl	IDLEX	0.000151
T6 Public Class 5	Dsl	RUNEX	0.001957
T6 Public Class 6	Dsl	IDLEX	5.57E-05
T6 Public Class 6	Dsl	RUNEX	0.000734
T6 Public Class 7	Dsl	IDLEX	0.00025
T6 Public Class 7	Dsl	RUNEX	0.004009
T6 Utility Class 5	Dsl	IDLEX	6.68E-06
T6 Utility Class 5	Dsl	RUNEX	0.00019
T6 Utility Class 6	Dsl	IDLEX	1.26E-06
T6 Utility Class 6	Dsl	RUNEX	3.59E-05
T6 Utility Class 7	Dsl	IDLEX	1.41E-06
T6 Utility Class 7	Dsl	RUNEX	4.93E-05
T7 CAIRP Class 8	Dsl	IDLEX	0.009652
T7 CAIRP Class 8	Dsl	RUNEX	0.121939
T7 NNOOS Class 8	Dsl	IDLEX	0.012549
T7 NNOOS Class 8	Dsl	RUNEX	0.176704
T7 NOOS Class 8	Dsl	IDLEX	0.005432
T7 NOOS Class 8	Dsl	RUNEX	0.064145
T7 Other Port Class 8	Dsl	IDLEX	0.000232
T7 Other Port Class 8	Dsl	RUNEX	0.011786
T7 POAK Class 8	Dsl	IDLEX	1.28E-11
T7 POAK Class 8	Dsl	RUNEX	3.11E-10
T7 POLA Class 8	Dsl	IDLEX	1.36E-11
T7 POLA Class 8	Dsl	RUNEX	4.96E-10
T7 Public Class 8	Dsl	IDLEX	0.000727
T7 Public Class 8	Dsl	RUNEX	0.017692
T7 Single Concrete/Transit Mix Class		IDLEX	9.00E-05
T7 Single Concrete/Transit Mix Class		RUNEX	0.00225
T7 Single Dump Class 8	Dsl	IDLEX	0.000786
T7 Single Dump Class 8	Dsl	RUNEX	0.014401
T7 Single Other Class 8	Dsl	IDLEX	0.00383
T7 Single Other Class 8	Dsl	RUNEX	0.047609
T7 SWCV Class 8	Dsl	IDLEX	0.000219
	_ 5.	,	5.555215

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McKinleyville Town Center Rezone 2045 Fuel Demand

T7 SWCV Class 8	Dsl	RUNEX	0.015838
T7 Tractor Class 8	Dsl	IDLEX	0.005314
T7 Tractor Class 8	Dsl	RUNEX	0.059567
T7 Utility Class 8	Dsl	IDLEX	7.08E-06
T7 Utility Class 8	Dsl	RUNEX	0.000326
UBUS	Dsl	RUNEX	5.67E-05
LDA	Gas	RUNEX	1.077437
LDA	Gas	STREX	0.031416
LDT1	Gas	RUNEX	0.089038
LDT1	Gas	STREX	0.002846
LDT2	Gas	RUNEX	0.838915
LDT2	Gas	STREX	0.026083
LHD1	Gas	IDLEX	0.000557
LHD1	Gas	RUNEX	0.118713
LHD1	Gas	STREX	0.001813
LHD2	Gas	IDLEX	4.14E-05
LHD2	Gas	RUNEX	0.009434
LHD2	Gas	STREX	0.000116
MCY	Gas	RUNEX	0.007361
MCY	Gas	STREX	0.00087
MDV	Gas	RUNEX	0.559487
MDV	Gas	STREX	0.01872
MH	Gas	RUNEX	0.006421
MH	Gas	STREX	9.36E-07
OBUS	Gas	IDLEX	2.41E-05
OBUS	Gas	RUNEX	0.002447
OBUS	Gas	STREX	4.08E-05
SBUS	Gas	IDLEX	5.40E-05
SBUS	Gas	RUNEX	0.000882
SBUS	Gas	STREX	4.84E-06
T6TS	Gas	IDLEX	0.000152
T6TS	Gas	RUNEX	0.0179
T6TS	Gas	STREX	0.00025
T7IS	Gas	RUNEX	6.74E-05
T7IS	Gas	STREX	5.35E-07
UBUS	Gas	RUNEX	0.000261
UBUS	Gas	STREX	5.24E-07
LDA	Phe	RUNEX	0.026076
LDA	Phe	STREX	0.001366
LDT1	Phe	RUNEX	0.000781
LDT1	Phe	STREX	4.54E-05
LDT2	Phe	RUNEX	0.008895
LDT2	Phe	STREX	0.000571
MDV	Phe	RUNEX	0.005472
1410 4		NOIVEX	0.005472

APPENDIX # EMFAC2021 McKinleyville Town Center Rezone 2045 Fuel Demand

MDV Phe STREX 0.000431

GHD Biological Reports





Technical Memorandum

January 26, 2023

То	Ann Lindsay, LPH	Contact No.	(707) 267-2207
Copy to	George Williamson, LPH	Email	Miles.hartnett@ghd.com
From	Miles Hartnett, GHD	Project No.	12603187
Project Name	oject Name Life Plan Humboldt (LPH) Wooded Area Assessment		
Subject Wooded Area Assessment for APN(s) 510-133-013 and 508-251-060, Hiller Rd. McKinleyville, CA			

Purpose

The purpose of this technical memorandum is to characterize wooded areas on APN(s) 510-133-013 and 508-251-060, Hiller Rd. McKinleyville, CA and map the vertical and horizontal locations of existing non-eucalyptus trees within the two parcels (project area). Recommendations are provided to avoid and/or minimize impacts to federally threatened or endangered avian species, raptors, and migratory birds.

Methods.

Miles Hartnett, GHD wildlife biologist, conducted a site inspection on January 19, 2023 to characterize wooded areas (i.e. eucalyptus grove, conifers) on the proposed project area. The location (vertical and horizontal) of non-eucalyptus/conifer trees greater than 6 inches diameter at breast height (DBH) were mapped using an Eos Arrow Gold high-accuracy (centimeter grade) GPS device streaming RTK correction. Potential for roosting and/or nesting habitat for federally threatened or endangered avian species, raptors, and migratory birds were assessed based on habitat present. Protocol level surveys for special status wildlife and/or nesting bird species were not completed as this time.

Results

Wooded areas within the proposed project area are primarily comprised of blue gum eucalyptus (*Eucalyptus globulus*). The eucalyptus grove contains an estimated 200 eucalyptus trees up to 50 inches DBH with a few native conifer and hardwood species scattered throughout (Figure 1: Wooded Area Assessment). A PG&E powerline runs east and west through the grove. The eucalyptus grove is expanding south into the adjacent field as evidenced by a vigorous population of regenerating saplings and seedlings.

Non-eucalyptus trees above 6 inches DBH throughout the proposed project area include 44 red alder (*Alnus rubra*) trees 6-24 DBH, six Sitka spruce (*Picea sitchensis*) trees 10-55 inches DBH, five Monterey pine (*Pinus radiata*) trees 10-68 inches DBH, five elderberry (*Sambucus sp.*) shrubs up to 8 inches DBH, two Douglas-fir trees (*Pseudotsuga menziesii*) 6-18 inches DBH, one grand fir (*Abies grandis*) tree 17 inches DBH, and three coastal willow (*Salix hookeriana*) trees 6-7 inches DBH amongst a patch of small (<4 inches DBH) coastal willow shrubs.

Horizontal and vertical location data for a total of 66 non-eucalyptus tree points were collected and mapped (see Figure 1: Wooded Area Assessment). Horizontal and vertical location data of each tree point can be accessed in the GIS spatial files. Species and size classes of trees identified within the proposed project area are detailed in Table 1 below.

Table 1: Species and size classes of trees identified within the proposed project parcels.

Species name	Common name	Quantity	Size Class (inches)	Status
Abies grandis	grand fir	1	17 inches DBH	Native
Alnus rubra	red alder	44	6-24 inches DBH	Native
Eucalyptus globulus	blue gum eucalyptus	200 (estimated)	6-50 inches DBH	Non-native invasive
Picea sitchensis	Sitka spruce	6	10-55 inches DBH	Native
Pinus radiata	Monterey pine	5	10-68 inches DBH	Non-native invasive
Pseudotsuga menziesii	Douglas-fir	2	6-18 inches DBH	Native
Salix hookeriana	coastal willow	3	6-7 inches DBH	Native
Sambucus sp.	elderberry	5	4- 8 inches DBH.	Native

Wooded areas throughout the proposed project area do not contain suitable habitat for any potentially occurring federally threatened or endangered avian species including the marbled murrelet (*Brachyramphus marmoratus*), northern spotted owl (*Strix occidentalis caurina*), western snowy plover (*Charadrius nivosus nivosus*), and yellow-billed cuckoo (*Coccyzus americanus*). All vegetated areas within the proposed project area do, however, contain suitable habitat for other common migratory and/or nesting bird species including raptors and other special status species.

Recommendations

The following recommendations are to avoid and/or minimize impacts to federally threatened or endangered avian species, raptors, and migratory birds.

- It is recommended, if feasible, that all major vegetation and/or tree removal be conducted outside of nesting bird season (typically March 1-August 15 of any year) to avoid impacts to nesting birds
- If vegetation removal must occur during nesting bird season it is recommended that preconstruction
 nesting bird surveys be conducted no more than 7 days prior to the onset of vegetation removal or
 other ground-breaking activities during nesting bird season. Nesting bird season is typically March
 1-August 15 of any year or whenever nesting bird behavior (i.e. copulation, nest building) is
 displayed. If active bird nests are located, buffer zones and mitigation measures should be
 established by a qualified biologist in consultation with the California Department of Fish and
 Wildlife (CDFW) until all fledglings have left the nest.
- Consultation with the United States Fish and Wildlife Service (USFWS) regarding federally threatened or endangered avian species is not anticipated.

Please do not hesitate to reach out if you have any questions or concerns regarding this report.

Regards,

Miles Hartnett Wildlife Biologist



Aquatic Resources Delineation Report

Life Plan Humboldt

March 8, 2023



Aquatic Resources Delineation Report Life Plan Humboldt

This document has been prepared for:

Life Plan Humboldt 2475 North Bank Rd. McKinleyville, CA 95519 USA

By:



GHD

718 Third Street
Eureka, CA 95501, United States
T 707 443 8326 | E misha.schwarz@ghd.com | ghd.com

March 8, 2023

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1. Summary

GHD prepared this Aquatic Resources Delineation Report and accompanying appendices on behalf of Life Plan Humboldt (Client), in support of the proposed Life Plan Humboldt (Project) within the community of McKinleyville, California (**Appendix A, Figure 1**). The surveys were conducted within the Project Study Boundary (PSB) as shown in **Appendix A, Figure 2**. GHD conducted the aquatic resource delineation fieldwork on January 19th, 25th, and 31st 2023. United States Army Corps of Engineers (USACE) three-parameter wetlands were mapped based on wetland indicative vegetation, hydric soils, and wetland hydrology. In addition to USACE three-parameter wetlands, one and two-parameter wetlands were mapped per the wetland definition provided in the McKinleyville Community Plan, 2002.

The aquatic resource delineation identified one contiguous three-parameter wetland area and two one-parameter wetland areas. The three-parameter wetland consists of swale extending southeast from the northwestern section of the PSB and is likely USACE and Regional Water Quality Control Board (RWQCB) jurisdictional. The total area of the three-parameter wetland mapped within the PSB is 23,940. The two one-parameter wetland areas regulated under the McKinleyville Community Plan consisted of a 724 square foot (sqft) patch of hydrophytic vegetation adjacent to the three-parameter wetland and 171 sqft depressional area within the eastern portion of the PSB. The drainage ditch along the south side of Hiller Rd is a part of McKinleyville's municipal drainage system and was determined to be an upland ditch based on dominant uplands vegetation. The drainage ditch is likely within the 80-ft County Righty of Way for Hiller Rd. Other waters such as lakes, streams, and watercourses were not observed within the PSB. Please see **Appendix A, Figure 2**, for a map detailing sample point locations and identified wetland areas.

2. Introduction

On behalf of the Life Plan Humboldt (LPH), GHD prepared this Aquatic Resource Delineation Report (also known as a wetland delineation report), and accompanying appendices, in support of the aging in place life plan community project (Project) in McKinleyville, Humboldt County, CA. This report provides an investigation into whether wetlands and/or other aquatic resources are present within the Project Study Boundary (PSB), and can support future environmental documentation, permitting, and construction planning for the Project as deemed appropriate. This report is subject to, and must be read in conjunction with, the limitations set out in Section 6, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

2.1 Site Location and Project Description

The Project includes the development of an aging in place life plan community consisting of multiple residential units and other amenities. The Project site located within Section 6, Township 06 North, Range 01 East, and Section 31, Township 07 North, Range 01 East, Arcata North USGS 7.5 Minute Quadrangle, in Humboldt County, California. The site is comprised of approximately 14.7 acres and includes the entirety of Assessor Parcel Numbers (APNs) 510-133-013 and 508-251-060 on Hiller Road, McKinleyville, California (**Appendix A, Figure 1**).

The PSB consists of the two APNs and contains an open pasture and scattered eucalyptus grove bordered by the McKinleyville shopping center and open space to the north, commercial development to the east, residential development to the south, and a church and active pastureland to the west. The property is a generally flat to gently sloped with a small swale that dissects the site in a north westerly direction.

2.2 Regulatory Background

2.2.1 Federal

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 230.3 states the following:

The term waters of the United States are defined as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (4) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (5) Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
- (6) The territorial sea;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. (40 CFR § 230.3).

Wetlands Definition

40 CFR § 230.3 continues and defines, "(t) The term wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas" (40 CFR § 230.3).

Wetland Delineation Manual

The 1987 USACE Wetland Delineation Manual provides guidelines and methods to determine whether an area is a wetland subject to federal regulation under Section 404 of the Clean Water Act. The manual specifies that wetland hydrology, soil, and vegetation indicators must be present to identify a wetland (USACE 1987, p. 10). In addition, the Wetlands Delineation Manual states, "If hydrophytic vegetation is

being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE, 1987).

Federal Geographic Data Committee (FGDC) Wetland Classification Standard

The Classification of Wetlands and Deepwater Habitats of the United States (FGDC, 2013) provides a nationally standardized hierarchical system for classifying wetland and deepwater habitats based on Cowardin et al. (1979). The National Wetland Inventory (NWI), a publicly available resource that provides information on the distribution of wetlands in the U.S., classifies wetlands according to the FDGC standard. The FDGC classification is based on a definition of wetlands with at least one of the three wetland attributes: predominantly hydrophytic vegetation, predominantly hydric soil, and hydrology. However, they state that all available information should be used, and all three attributes should be considered if they are present (FGDC, 2013).

2.2.2 State

The State Water Resources Control Board's (SWRCB) April 2019 Procedures for Discharges of Dredged or Fill Material to Waters of the State says the following:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:

- 1. Natural wetlands.
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands that meet any of the following criteria:
 - a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
 - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
 - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
 - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,

- iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
- iv. Treatment of surface waters,
- v. Agricultural crop irrigation or stock watering,
- vi. Fire suppression,
- vii. Industrial processing or cooling,
- viii. Active surface mining even if the site is managed for interim wetlands functions and values.
- ix. Log storage,
- x. Treatment, storage, or distribution of recycled water, or
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
- xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state" (SWRCB, 2019).

The February 2020 Draft Guidance State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State further clarifies as follows:

Human activity can cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities, and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area, such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the construction of the artificial wetlands would be too recent to be deemed "historic" and the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape" (SWRCB, 2020).

The RWQCB carry out and regionally regulate the SWRCB's definition of Waters of the State.

2.2.3 McKinleyville Community Plan

The McKinleyville Community Plan (2002, updated 2017) section 3422 defines wetland areas using a one-parameter definition as follows (p. 57):

Item 7. Wetland Areas shall be defined according to the criteria utilized by the CA Dept. of Fish and Game (also included in the County's Open Space Implementation Standards). In summary, the definition requires that a given area satisfy at least one of the following three criteria:

- The presence of at least periodic predominance of hydrophytic vegetation; or,
- predominately hydric soils; or,
- periodic inundation for seven (7) consecutive days.

Item 12. For purposes of these requirements, wetlands and wetland buffer standards shall not apply to watercourses consisting entirely of a drainage ditch, or other man-made drainage device, construction or system.

For this study "one-parameter wetlands" are areas that meet the definition of wetlands under the McKinleyville Community Plan detailed above.

3. Methodology

3.1 Aquatic Resources Delineation Approach

GHD scientists conducted the aquatic resource delineation on January 19th, 25th, and 31st 2023. To define a wetland, the USACE requires that vegetation, soil, and hydrology (three-parameters) all show wetland attributes (USACE 1987; USACE 2010). The wetland delineation used USACE criteria from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 2010). The current standard field forms provided by the USACE (2010) were used to collect vegetation, soils, and hydrology data (**Appendix B, USACE Wetland Determination Data Forms**).

In potential three-parameter wetland areas, vegetation, soil, and hydrology data were collected in a transect across the upland/wetland boundary with two paired plots (upland/wetland) per transect. The naming convention used on datasheets to designate upland or wetland plots associated with a transect is -U or -W, respectively.

Three-parameter wetland/upland boundaries and plots were mapped in the field with an Eos Arrow Gold high-accuracy (centimeter grade) GPS streaming RTK correction and an iPad running ArcGIS Collector software. The wetland/upland boundary was recorded with the GPS unit as needed to map the wetland's spatial extent. The points were then connected in the office using ArcMap software for figure creation and the boundaries were clipped to the extent of the PSB.

Each wetland area was designated with a number (e.g., W1). The wetland points were also labeled with their respective wetland number. In addition to the wetland sampling points, upland sampling points were described. These were labeled beginning with "Up" and numbered in sequence (e.g., Up1, Up2). The upland sampling points were completed to confirm and document the absence of any wetland indicators (soils, hydrology, and vegetation). **Appendix B** contains all datasheets recorded during the delineation.

Areas outside of three-parameter wetlands that met one or two parameters were designated one-parameter wetlands per the McKinleyville Community Plan definition of wetlands described in **Section 2.2.3**.

3.2 Botanical Methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer within a standard-sized plot determined by the strata layer. Nomenclature follows *The Jepson Manual* (Baldwin et al. 2012), which was cross-checked to federal standard nomenclature to identify the indicator status. The species' wetland indicator status for the Western Mountains, Valleys, and Coast Region was denoted in the respective column, using the standard reference: *State of California 2016 Wetland Plant List* (Lichvar et al. 2018). This list classifies species based on the probability that they are found in wetlands (USACE 1987) as follows:

- Obligate (OBL): almost always in wetlands (99% probability)
- Facultative Wetland (FACW): usually occurring in wetlands (67% to 99% probability)
- Facultative (FAC): commonly occurring in wetlands and uplands (34% to 66% probability of occurring in wetlands)
- Facultative Upland (FACU): usually occurring in uplands (1% to 33% probability of occurring in wetlands)
- Upland (UPL): upland obligate, rarely in wetlands (1% in wetlands)

Species that do not appear on the list are considered to be in the upland category (Lichvar et al. 2018). Standard procedures for documenting hydrophytic vegetation indicators were used per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010).

The prevalence index, a weighted metric of all dominant and non-dominant species present, was calculated in areas dominated by FAC species where wetland hydrology and hydric soil were not observed. The sample points at locations that did not pass the prevalence index or FAC-neutral test, and were not accompanied by indicators of wetland hydrology or hydric soils were not determined to consist of hydrophytic vegetation for the purposes of determining one-parameter wetlands under the McKinleyville Community Plan.

3.3 Soils Methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018 version 8.2). Soil pits were dug to an approximate depth of 18 inches or to the depth otherwise required to confirm hydric soil indicators. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 that are indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2018).

The *Munsell Soil Color Book* (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with *Field Indicators of Hydric Soils in the United States* (Version 8.2, 2018).

3.3.1 Existing Soils Information

The NRCS identifies two main soil units within the PSB (**Appendix D, NRCS Custom Soil Resources Report**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2022). Although NRCS soil mapping is informative, the scale is generally too broad to definitively accurately characterize potential wetlands/uplands boundaries.

Soil map units within the PSB include soil map units 145: Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes, and soil map unit 225: Arcata and Candymountain soils, 0 to 2 percent slopes. These soil map units are described below:

Soil Map Unit 145: Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes.

The map unit composition is as follows: 35 percent Halfbluff and similar soils, 30 percent Tepona and similar soils, 25 percent Urban Land, residential and 10 percent minor components. The Halfbluff-Tepona soil type setting includes marine terraces, backslopes or tread of marine deposits derived from sedimentary rock parent material. The Urban Land soil setting includes alluvial fans.

The Halfbluff soil series is classified as an Oxyaquic Humudepts. The a depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is moderate, or about 7.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is 1, and non-irrigated land capability classification is 2s1. The hydrologic soil group is C. The soil series unit is inherently not hydric.

The Tepona soil series is classified as an Oxyaquic Humudepts, The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is high, or about 9.4 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 2s. The hydrologic soil group is C. The soil series unit is inherently not hydric.

For the Urban Land portion of the soil complex, depth to a restrictive, drainage classes and frequency of ponding or flooding is not stated. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 8. The hydrologic soil group is not stated. The soil series unit is not considered hydric.

The descriptions of the minor components are as follows: five percent Talawa (considered hydric), three percent Tillas (not considered hydric), and two percent Hookton (not considered hydric) (NRCS 2020).

Soil Map Unit 225: Arcata and Candymountain soils, 0 to 2 percent slopes

The map unit composition is as follows: 50 percent Arcata and similar soils, 35 percent Candymountain and similar soils, and 15 percent minor components. The Arcata and Candymountain soil setting includes marine terraces, backslopes or tread of marine deposits derived from mixed sources of parent material.

The Arcata soil series is classified as a Pachic Humudepts. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately

high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is 1 and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

The Candymountain soil series is classified as a Typic Humudept. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

The descriptions of the minor components, which are mostly inherently not hydric except for the Talawa soil series, are as follows: four percent Urban land, three percent Timmons, three percent Halfbluff, three percent Megwil, and two percent Talawa (NRCS 2020).

Please see the full report in **Appendix D** for complete details.

3.4 Precipitation and Hydrology

GHD performed the investigation within the PSB during January 19th, 25th, and 31st 2023, during the winter wet season after a period of above average rainfall. Precipitation was within normal thresholds according to the USDA WETS tables at the time fieldwork was conducted. A WETS table showing climatic data for the Arcata Eureka Airport, CA, Station is provided in **Appendix E, NRCS National Water and Climate Center WETS Table)** (NOAA 2023). Aerial photography and the National Wetland Inventory (NWI) Mapper were referenced before conducting fieldwork (**Appendix A, Figure 4**) (NWI 2023). The closest stream or water body is Widow White Creek, approximately 3,280 ft north of the PSB. The PSB is located outside of the 100-year flood zone according to the FEMA National Flood Hazard Layer (NFHL) (**Appendix A, Figure 5**). Wetland hydrology indicators, such as drainage patterns, material deposits, soil saturation, high water table, or surface water presence, were recorded in the field.

4. Results

The PSB contains one three-parameter wetland, comprising of 23,940 sqft and is likely USACE and RWQCB jurisdictional and regulated by the McKinleyville Community Plan. Additionally, the PSB contains two small one-parameter wetlands, comprising a total of 895 sqft, regulated by the McKinleyville Community Plan. The roadside ditch along Hiller Rd is part of the municipal storm drainage system and drains under Hiller Rd. through a 36-inch (outside diameter (OD)) concrete culvert. The roadside ditch was determined to be an upland ditch with a dominance of upland vegetation and is not likely to be USACE or RWQCB jurisdictional nor regulated by the McKinleyville Community Plan. **Appendix A, Figure 2** shows the results of the aquatic resource delineation.

Total area in square feet of identified wetlands within the PSB are detailed in **Table 1** below:

Table 1. Wetland Areas Identified Within the PSB

Wetland ID	Wetland Type	Area (sqft)	Coordinates (lat/long)
Wetland 1 (W1)	Three-parameter	23,940	40.941395, -124.105482
Wetland 2 (W2)	One-parameter	724	40.941289, -124.105601
Wetland 3 (W3)	One-parameter	171	40.941740, -124.105874

4.1 Three-Parameter Wetlands

One contiguous three-parameter wetland was mapped within the PSB as "Wetland 1" totaling 23,940 sqft and is likely under the jurisdiction of both the USACE and RWQCB and regulated by the McKinleyville Community Plan (**Appendix C, Photo 1**). Wetland 1 consists of a wet swale extending inward from the northwest corner of the PSB and can be classified as a Palustrine Emergent wetland (PEM) according to the Cowardin system (FGDC 2013). Wetland 1 is not hydrologically connected by surface flows to any other waters.

Dominant vegetation within Wetland 1 consisted primarily of common rush (*Juncus effusus*, FACW), bent grass (*Agrostis stolonifera*, FAC), and common velvetgrass (*Holcus lanatus*, FAC). Sample points within Wetland 1 met hydrophytic vegetation indicator 2 by passing the dominance test for hydrophytic vegetation.

Soils within Wetland 1 consisted of loams with a 10YR 2/1 upper horizon from 0-19 inches directly underlain by 10YR 4/1 and/or 10YR 4/2 depleted horizons from 16-35 inches with 25% 7.5 YR 6/8 and/or 10YR 6/8 redoximorphic features. Sample points within Wetland 1 met hydric soil indicator Thick Dark Surface (A12).

Observations of hydrology within Wetland 1 consisted primarily of the presence of surface water, saturation within 12 inches of the soil surface, and the presence of reduced iron within 12 inches of the soil surface verified by a positive reaction to alpha

, alpha-dipyridyl ($\alpha\alpha$ -dip). Sample points within Wetland 1 met primary wetland hydrology indicators Surface Water (A1), Saturation (A3), and Presence of Reduced Iron (C4), as well as secondary indicators Geomorphic Position (D2) and passing the FAC-Neutral Test (D5).

Two paired sample point transects consisting of soil pits and vegetation plots were collected for Wetland 1 (W1), the only three-parameter wetland identified within the PSB. GPS coordinates of three-parameter wetland sample point locations for each transect are detailed below in **Table 2**:

Table 2. Three-Parameter Wetland Sampling Point Locations

Sample Point	Coordinates (lat/long)	
W1T1-w	40.941395, -124.105482	
W1T1-u	40.941289, -124.105601	
W1T2-w	40.941740, -124.105874	
W1T2-u	40.941777, -124.105691	

Please see **Appendix A**, **Figure 2** for a map of delineated wetlands within the PSB and **Appendix B**, **USACE Wetland Determination Data Forms**, for more details regarding data collected at each sample point location.

4.2 One-Parameter Wetlands

Two separate one-parameter wetlands were mapped within the PSB as "Wetland 2" and "Wetland 3" and may be regulated via the McKinleyville Community Plan. These areas showed signs of wetland vegetation, wetland soils, and/or wetland hydrology, but lacked the indicators necessary to meet all three wetland parameters. Sample points that met one or two wetland parameters were classified and mapped as one-parameter wetlands for the purposes and regulatory framework guiding this study (to conform to the wetlands definition in the McKinleyville Community Plan.

Wetland 2 met two wetland parameters, is comprised of 724 sqft, and is located at the at the northeast end of Wetland 1 (**Appendix C**, **Photo 2**). Wetland 2 is likely hydrologically connected to Wetland 1. Dominant vegetation within Wetland 2 consisted primarily of slough sedge (*Carex obnupta*, OBL), California blackberry (*Rubus ursinus*, FACU), and coastal willow (*Salix hookeriana*, FACW). Sample points within Wetland 2 met hydrophytic vegetation indicator 2 by passing the dominance test for hydrophytic vegetation.

Soils within Wetland 2 consisted of loams with a 10YR 2/1 upper horizon from 0-10 inches underlain by a 10YR 3/2 horizon from 10-13 inches with 5% 10YR 5/8 distinct redoximorphic features and a 2.5Y 5/4 depleted horizon from 13-20 inches with 30% 7.5 YR 5/8 distinct redoximorphic features. The 10YR 3/2 horizon from 10-13 inches had chroma too high to meet the Thick Dark Surface (A12) hydric soil indicator observed in adjacent wetlands within the PSB. Sample points within Wetland 2 did not meet any hydric soil indicators.

Observations of hydrology within Wetland 2 included of the presence of a water table at 15 inches from the soil surface, and saturated soil at 10 inches from the soil surface. inches of the soil surface. Application of $\alpha\alpha$ -dip tested negative throughout the soil profile. Sample points within Wetland 2 met primary wetland hydrology indicator Saturation (A3), as well as secondary indicator Geomorphic Position (D2).

Wetland 3 met two wetland parameters, is comprised of 171 sqft, and is located in a depression at the lower end of a shallow upland swale along the southern edge of the eucalyptus grove (**Appendix C, Photo 3**). There was evidence of mixed soil horizons in Wetland 3 indicating some level of mechanical disturbance or excavation likely causing the depression. Wetland 3 is not hydrologically connected by surface flows to any other waters.

Dominant vegetation within Wetland 3 consisted primarily of blue gum eucalyptus (*Eucalyptus globulus*, UPL), and sweet vernal grass (*Anthoxanthum odoratum*, FACU). Sample points within Wetland 3 did not pass the dominance test or prevalence index for hydrophytic vegetation and lacked any other indicators for hydrophytic vegetation.

Soils within Wetland 3 consisted of loams with a 10YR 2/1 upper horizon from 0-10 inches directly underlain by a 10YR 4/1 depleted horizon form 10-16 inches with 5% 5 YR 5/8 distinct redoximorphic features. Sample points within Wetland 3 met hydric soil indicator Thick Dark Surface (A12).

Observations of hydrology within Wetland 3 included of the presence of a water table at 4 inches from the soil surface, and saturated soil at 1 inch from the soil surface. Application of αα-dip tested positive at 12 inches from the soil surface. The sample point within Wetland 3 met primary wetland hydrology indicators High Water Table (A2), Saturation (A3), Algal Mat or Crust (B4), Presence of Reduced Iron (C4), as well as secondary indicators Water-Stained Leaves (B9) and Geomorphic Position (D2).

Sample points consisting of soil pits and vegetation plots were taken within each one-parameter wetland area identified within the PSB. A single sample point (in the wetland area) was collected for Wetland 2 (W2) and a paired sample point (wetland and upland) transect was collected for Wetland 3 (W3). GPS coordinates of one-parameter wetland sample point locations are detailed below in **Table 3**:

Table 3. One-Parameter Wetland Sampling Point Locations

Sample Point	Coordinates (lat/long)
W2-w	40.941395, -124.105482
W3T1-w	40.941289, -124.105601
W3T1-u	40.941740, -124.105874

Please see **Appendix A**, **Figure 2** for a map of delineated wetlands within the PSB and **Appendix B**, **USACE Wetland Determination Data Forms**, for more details regarding data collected at each sample point location.

4.3 Uplands

Nine upland sampling points were collected to characterize various areas throughout the PSB that may be affected by Project related activities (**Appendix C, Photos 4-6**). These areas did not show signs of wetland hydrology, hydric soils, or wetland vegetation.

Dominant vegetation in upland areas were comprised of blue gum eucalyptus (*Eucalyptus globulus*, UPL), California blackberry (*Rubus ursinus*, FACU), rattlesnake grass (*Briza maxima*, UPL), sweet vernal grass (*Anthoxanthum odoratum*, FACU), orchard grass (*Dactylis glomerata*, FACU), evergreen huckleberry (*Vaccinium ovatum*, FACU), salal (*Gaultheria shallon*, FACU), bent grass (*Agrostis stolonifera*, FAC), common velvetgrass (*Holcus lanatus*, FAC), reed fescue (*Festuca arundinacea*, FAC), red alder (*Alnus rubra*, FAC), and coastal willow (*Salix hookeriana*, FACW). Seven of the nine sample points in upland areas did not pass the dominance test hydrophytic vegetation and lacked any other indicators for hydrophytic vegetation.

Two of the nine upland sample points at Up3 and Up9 consisted entirely of FAC and FACU vegetation with a dominance of invasive non-native FAC graminoid species including reed fescue (*Festuca arundinacea*, FAC) at Up9, and bent grass (*Agrostis stolonifera*, FAC) at Up3. The lack of wetland hydrology and hydric soil at these sample points in addition to the prevalence of other upland vegetation suggests that these areas do not represent a predominance of hydrophytic vegetation but are rather being overtaken by invasive FAC species. The prevalence index, a weighted metric of all dominant and non-dominant species present, was calculated at these two sample points. The sample points at these locations did not pass the prevalence index or FAC-neutral test, were not accompanied by indicators of wetland hydrology or hydric soils and were thus not determined to consist of hydrophytic vegetation based on the result of the PI and FAC-neutral test (A PI great than 3.0 is not considered to be wetlands vegetation).

A summary of the vegetative metrics used to determine uplands vegetation at each upland sample point is detailed below in **Table 4**.

Table 4. Upland Plot Vegetation Determination

Upland Vegetation Plot ID	Dominance Test (Dominant species > 50% FAC, FACW, or OBL Vegetation)	FAC Neutral Test (Excluding FAC species)	Prevalence Index (Score ≤ 3.0 Consists of Hydrophytic Vegetation)	Hydrophytic Vegetation Present
			21/2	
Up1	Fail (0%)	Fail	N/A	No
Up2	Fail (50%)	Fail	N/A	No
Up3	Pass (100%)	Fail	Fail (3.05)	No
Up4	Fail (50%)	Fail	N/A	No
Up5	Fail (50%)	Fail	N/A	No
Up6	Fail (40%)	Fail	N/A	No
Up7	Fail (17%)	Fail	N/A	No
Up8	Fail (50%)	Fail	N/A	No
Up9	Pass (100%)	Fail	Fail (3.2)	No

Soils in upland areas consisted mostly of loams with an upper horizon of 10YR 3/3 from 0 to 10 inches with no redoximorphic features, and a lower horizon from 10 to 18 inches of 10YR 3/4 with no redoximorphic features. Upland sample points in closer proximity to wetland areas had soils consisting of darker loams with an upper horizon of 10YR 2/2 from 0-19 inches, and a lower horizon of 10YR 4/3 with 30% redoximorphic features from 19-30 inches. These upland sample points in closer proximity to wetland areas were used in paired transects and often showed darker upper horizons with chromas too high to meet the Thick Dark Surface (A12) hydric soil indicator found in adjacent wetlands.

Hydrology observed in upland areas generally lacked the presence of surface water, high water table, soil saturation within 12 inches of the soil surface and had negative reactions to $\alpha\alpha$ -dip. Two upland sample points used in paired transects in closer proximity to wetland areas showed signs of soil saturation within 12 inches of the soil surface but lacked indicators for wetland vegetation and hydric soils. Field sampling took place after substantial precipitation events resulting in above average rainfall for the area (see WETS tables) and it is likely that soil saturation observed at or immediately above 12 inches from the soil surface is transitory and likely does not persist for long enough to support hydrophytic vegetation or develop hydric soils in the upper substrate. Upland sample points did not show sufficient indicators for wetland hydrology.

Upland sampling points consisting of soil pits and/or vegetation plots were taken at various locations throughout the PSB to confirm the presence of upland areas. A total of nine upland sample points were collected throughout the PSB. GPS coordinates of upland sample point locations are detailed below in **Table 4**:

Table 4. Upland Sampling Point Locations

Sample Point	Coordinates (lat/long)
Up1	40.941768, -124.104623
Up2	40.940900, -124.104919
Up3	40.940810, -124.106718
Up4	40.941996, -124.106074
Up5	40.942060, -124.106203
Up6	40.942045, -124.105508
Up7	40.942027, -124.104744
Up8	40.941817, -124.103764
Up9	40.941171, -124.103572

Please see **Appendix A**, **Figure 2** for a map of delineated wetlands within the PSB and **Appendix B**, **USACE Wetland Determination Data Forms**, for more details regarding data collected at each sample point location.

4.4 Other Waters

Other waters such as streams, lakes, and watercourses were not observed within the PSB. The roadside ditch likely within the 80-ft County Righty of Way along the south side of Hiller Rd. was determined to be an upland ditch dominated by upland vegetation including California blackberry (*Rubus ursinus*, FACU), salal (*Gaultheria shallon*, FACU), evergreen huckleberry (*Vaccinium ovatum*, FACU), red alder (*Alnus rubra*, FAC), reed fescue (*Festuca arundinacea*, FAC) and bentgrass (*Agrostis stolonifera*, FAC). The ditch does not meet the definition of Waters of the U.S. and/or Waters of the State an is not regulated by the McKinleyville Community Plan. The ditch drains into a 36-inch concrete culvert and flows into a similar roadside ditch north of Hiller Rd (*Appendix C*, *Photos 7-8*). Three sample points, Up5, Up6, and Up7, were collected along the ditch all showing predominance of upland vegetation (*Appendix B*, *USACE Wetland Determination Data Forms*).

5. Conclusions

The aquatic resources delineation prepared for Life Plan Humboldt, conducted on Assessor Parcel Numbers (APNs) 510-133-013 and 508-251-060 on Hiller Road, McKinleyville, California and completed on January 31th, 2023, determined the extent of three-parameter wetlands and one-parameter wetlands within the PSB based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 2010). Three-parameter wetlands mapped within the PSB totaled 23,940 square feet and are likely USACE and/or RWQCB jurisdictional. One-parameter wetlands mapped within the PSB totaled 895 square feet and are likely regulated under Section 3422 of the McKinleyville Community Plan. A map of all delineated wetlands within the PSB is included in **Appendix A**,

Figure 2. USACE Wetland Determination Data Forms showing sample point data collected in transects across wetland boundaries and additional upland sampling points is attached in **Appendix B**.

6. Special Terms and Conditions

6.1 Purpose of this Report

GHD prepared this report for the Client, and the Client may only use and rely on this report for the purpose agreed upon between GHD and the Client, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than the Client arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

6.2 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE jurisdictional approval letter is required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place on in early 2023.

The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points. Conditions at other locations of the site may be different from the conditions found at the specific sample points.

7. References

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8. Report Preparers

8.1 Client

Life Plan Humboldt, 2475 North Bank Rd, McKinleyville, CA 95519 USA

8.2 GHD

This report was prepared by the following GHD staff:

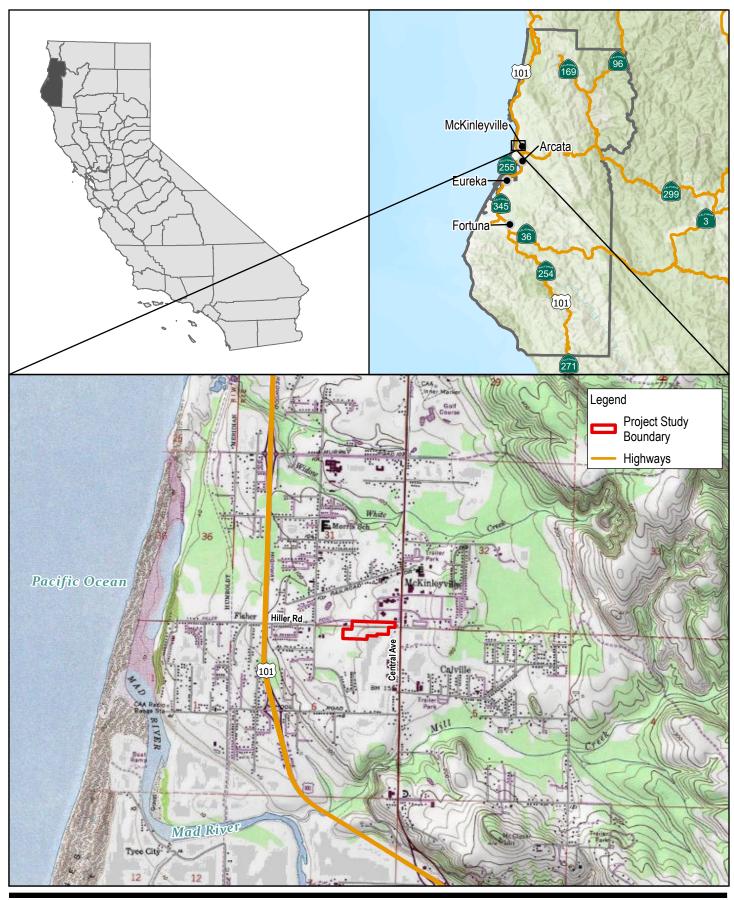
Miles Hartnett, Biologist/Wetland Scientist - Primary Author

Jane Cipra, Botanist - Contributor

Jesse Lopez, GIS Specialist - Maps and Figures

Misha Schwarz, PWS - Project Manager, Reviewer

Appendix A Figures





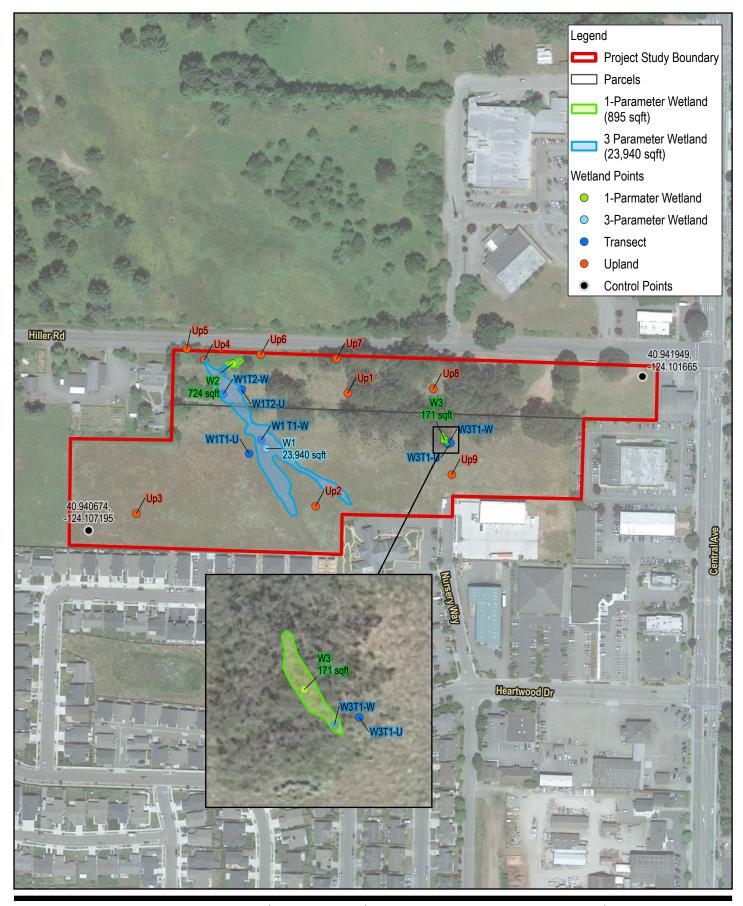
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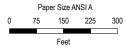


Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville

Project No. 12603187 Revision No.

Date Feb 2023





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



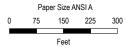
Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville Project No. 12603187 Revision No. -

Date Mar 2023

Wetland Delineation

FIGURE 2





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





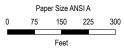
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Date Mar 2023

NRCS Soil Survey

FIGURE 3





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





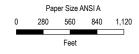
Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville

National Wetland Inventory (NWI)

Project No. 12603187 Revision No. -Date Mar 2023

FIGURE 4





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville

FEMA 100-year Flood Zone

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00-year Zone FI

Appendix B USACE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region City/County: Wy / March le / Hully Sampling Date: 1/17/2023 Applicant/Owner: LPH-Cite Plan Handel Sampling Point: Investigator(s): Mills HeAn Local relief (concave, convex, none): Slup / Slope (%): 0 Landform (hillslope, terrace, etc.): Magne Icrac. Lat: 40.941395 Long: 174 Subregion (LRR): ___ Datum: UAD 83 Soil Map Unit Name: Half Guff turma - Urhu NWI classification: PEM Are climatic / hydrologic conditions on the site typical for this time of year? Yes ? __ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology ___ Are "Normal Circumstances" present? Yes X No ___ significantly disturbed? Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: % Cover Species? Status **Number of Dominant Species** That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = ___ FAC species x3= FACU species x 4 = = Total Cover UPL species ____ x 5 = ____ Column Totals: _____ (A) ____ (B) Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 36 3 - Prevalence Index is ≤3.0¹ 70 estime mountacle 4 - Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants1 Problematic Hydrophytic Vegetation (Explain) 701/0-272 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Woody Vine Stratum (Plot size: Hydrophytic Vegetation Present? = Total Cover % Bare Ground in Herb Stratum Remarks:

00	11	
au	11	

1-16

Sampling Point: WITI-W

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(inches)	Color (moist)	%	Color (moist)	%	Type	Loc²	Texture:	Remarks
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16-35	10-11411	75	1046618	260/	-	M	sadicky	
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	g							
_	37		<u>, </u>	- A				
								<u> </u>
Type: C=Co	ncentration, D=Dep	letion, RM=	Reduced Matrix, CS	=Covered	or Coated	Sand G		ation: PL=Pore Lining, M=Matrix.
		able to all L	RRs, unless other		d.)		Indicato	rs for Problematic Hydric Solis ¹ :
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- 2	pedon (A2)		Stripped Matrix	Carlo				Parent Material (TF2)
Black His			Loamy Mucky N			MLRA 1)		Shallow Dark Surface (TF12)
	Sulfide (A4)	-	Loamy Gleyed I			7	Othe	er (Explain in Remarks)
	Below Dark Surfac	e (A11) _	Depleted Matrix					
	rk Surface (A12)		_ Redox Dark Sur					rs of hydrophytic vegetation and
	ucky Mineral (S1)	_	_ Depleted Dark S		7)			nd hydrology must be present,
	eyed Matrix (S4)		Redox Depressi	ions (F8)	4		unles	s disturbed or problematic.
	ayer (If present):							1
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(DD0) 00					11			=
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WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region _ City/County: Mckmkull / HUM Sampling Date: 1/18 2023 State: CA Sampling Point: WITI-U Applicant/Owner: Section, Township, Range: 50 1 TGAI RIE Investigator(s): Local relief (concave, convex, none): / MUY Slope (%): c-Lat: 46.941289 Long: - 17.4, 165/601 Subregion (LRR): ____ __ Datum: MDD 198 Soil Map Unit Name: 16 Abuff-Trang - Inchan NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology ___ ___ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. No Hydrophytic Vegetation Present? Yes is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? ach was sanded at above away raintell bused on observed soil EGETATION - Use scientific names of plants. Absolute **Dominant Indicator Dominance Test worksheet:** Tree Stratum (Plot size: ____ % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Total % Cover of: OBL species ____ x1=__ FACW species _____ x 2 = ____ x 3 = FAC species FACU species x 4 = = Total Cover ____ x5=___ UPL species Herb Stratum (Plot size: Column Totals: Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 15 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% + 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants1 Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Woody Vine Stratum (Plot size: Hydrophytic Vegetation Present? = Total Cover % Bare Ground in Herb Stratum Remarks:

0	0	81
J	u	41

Sampling Point: WI-TI-U

Profile Descript										
Depth	Matrix			Redox Feature						
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Hydric Soil India						d Carlo On			blematic Hydi	
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Histic Epiped			Stripped M					ed Parent Ma		
Black Histic				icky Mineral (F	1) (except	MLRA 1)			Dark Surface (1	F12)
Hydrogen Su	ılfide (A4)			eyed Matrix (F2					in Remarks)	
Depleted Bel	low Dark Surfac	ce (A11)	Depleted f	Matrix (F3)						
	urface (A12)			rk Surface (F6)					phytic vegetat	
	y Mineral (S1)		or - conser e - Fifth and sittlement of Hilliams	Dark Surface (F					gy must be pre	
	d Matrix (S4)		Redox De	pressions (F8)			unle	ess disturbed	or problemati	C
Restrictive Laye	r (If present):									
Type:		-								/
Depth (inches):						Illerdate Co.	il Present?	Yes	No
Remarks:				•			nyanc Sa	-		
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Applicant/Owner: Life Plan Humbold + Investigator(s): Miles Hartnet, Jane (Landform (hillslope, terrace, etc.): Mirru Lerrace Subregion (LRR): WMVC LRR-A Soil Map Unit Name: Halfbluff-Tepona-Vrban Are climatic / hydrologic conditions on the site typical for this Are Vegetation, Soil, or Hydrology r SUMMARY OF FINDINGS - Attach site map	Lat: Arms stime of year significantly do naturally prob	rection, Township, Ran ocat relief (concave, of 197289 cata + Candy Marror Yes No	(If no, explain in Remarks.) Normal Circumstances" present? Yes No eded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes N		Is the Sampled	Area
Hydric Soil Present? Yes V Netland Hydrology Present? Yes N		within a Wetlan	
Remarks: Precipitation is 100% of present. orox dipyiridol was p	norma	L. Westlan	
VEGETATION – Use scientific names of plan			25 18
Tree Stratum (Plot size:) 1	% Cover		Dominance Test worksheet: Number of Dominant Species / That Are OBL, FACW, or FAC: (A)
3.			Total Number of Dominant Species Across All Strata; (B)
Sapling/Shrub Stratum (Plot size: 5 m)		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:/00 % (A/B)
1. Salix hockeriana	2%	FACW	Prevalence Index worksheet:
2.			
3			FACW species x 2 =
4			FAC species x3=
5			FACU species x 4 =
Herb Stratum (Plot size:)		= Total Cover	UPL species x 5 =
1. Festuca avendinacea	5%	1711	Column Totals: (A) (B)
2. Holcus lanatus	70%		Prevalence Index = B/A =
3. Ranunculus repens	10%	FAC	Hydrophytic Vegetation Indicators:
4. Lotus cornicalatus	5%	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Jun ons officers	10%	FACW	2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.0¹
7			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11.			Indicators of hydric soil and wetland hydrology must
	100 =	Total Cover	be present, unless disturbed or problematic
Woody Vine Stratum (Plot size:)			,
1.			Hydrophytic
2		The state of the s	Vegetation Present? Yes \ No
% Bare Ground in Herb Stratum		Total Cover	
Remarks:			
A.			

Profile Descr	ription: (Describe	to the dept	h needed to docum	nent the indica	or or confi	m the absence	of indicators.)	19
Depth	Matrix			x Features		A POR		
(inches)	Color (moist)	%	Color (moist)	%Typ	Loc2	Texture	Re	emarks
H340-14	164 - 21:1	1000				look	9 - 1	
19-21	14 24/2	75	7.54/6/8	259/	I A	Saly		
	12/11/-		-13710/8	- 20	_ 101	INNER		1 (12)
ENO.								<u> </u>
			44.0					
			£1	2 4.				
	. 0			-				
	1		A	() () () () () () () ()			19.75	
	200						278	
			100				-	
¹Type: C=Cor	ncentration DaDen	lation DM=	Reduced Matrix, CS					
			RRs, unless other		aleo Sano C		cation: PL=Pore L	Ining, M=Matrix.
Histosol (22 1076/ACC-2007		**************************************	AND THE PARTY OF T	F		ors for Problemat	ic myaric Soils":
	pedon (A2)		Sandy Redox (S		- 1		n Muck (A10)	
Black His			Stripped Matrix Loamy Mucky M		ont BAL DA 4		Parent Material (
A	Sulfide (A4)		Loamy Gleyed N		ahr MFKW J	·	y Shallow Dark Su	
	Below Dark Surfac	e (A11)	Depleted Matrix			0(n	er (Explain in Rem	iarks)
	k Surface (A12)	- 1011111111111111111111111111111111111	Redox Dark Sur	. St 1000	104	3 _{Indiasta}	ors of hydrophytic	unnetalian and
	ucky Mineral (S1)		Depleted Dark S				nd hydrology mus	
	eyed Matrix (S4)	•	Redox Depressi				s disturbed or pro	
						Griica	s distarbed or pro-	Dicinatio,
	aver (if present):		100					
	ayer (if present):						1	
Type:			_ 1			Hardela O. H		×
Type: Depth (inch			_ 1			Hydric Soil	Present? Yes	<u> </u>
Type: Depth (inch	nes):	ασ		л.	a v	Hydric Soil	Present? Yes	× No
Type: Depth (inch	nes):	αα	<u> </u>	- A	5.	Hydric Soil	Present? Yes	<u> </u>
Type: Depth (inch		a a	diphe di		5, <u>=</u>	Hydric Soil	Present? Yes	<u> No</u>
Type: Depth (inch	nes):	a a	a.p.			Hydric Soil	Present? Yes	<u> No</u>
Type: Depth (inch Remarks:	postu to	a a	a.p.		T,	Hydric Soil	Present? Yes	<u> No</u>
Type:	postu to		a.p.d.		· _	Hydric Soil	Present? Yes	<u> No</u>
Type: Depth (inch Remarks: IYDROLOG Wetland Hydr	Postulations:	<u> </u>				Hydric Soil	Present? Yes	<u>× No</u>
Type: Depth (inch Remarks: IYDROLOG Wetland Hydr	Postulations:	<u> </u>	check all that apply)		*		A
Type: Depth (inch Remarks: IYDROLOG Wetland Hydr	Post to the state of the state	<u> </u>	check all that apply		(except	Secon	ndary Indicators (2	or more required)
Type:	Post to the state of the state	<u> </u>	check all that apply Water-Stair	ned Leaves (B9)		Secon	ndary Indicators (2 /ater-Stained Leav	or more required)
Type:	Post to the state of the state	<u> </u>	check all that apply Water-Stair MLRA 1	ned Leaves (B9) , 2, 4A, and 4 B		Secon W	ndary Indicators (2 /ater-Stained Leav 4A, and 4B)	or more required) res (B9) (MLRA 1,
Type:	rology Indicators: vater (A1) er Table (A2)	<u> </u>	check all that apply Water-Stair MLRA 1 Salt Crust (ned Leaves (B9) , 2, 4A, and 4B B11)			ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (or more required) res (B9) (MLRA 1,
Type:	rology Indicators: Notes: No	<u> </u>	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13)			ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ry-Season Water	or more required) res (B9) (MLRA 1, B10) Table (C2)
Type:	rology Indicators: Itors (minimum of or Vater (A1) In (A3) In (A3) In (B1) Deposits (B2)	<u> </u>	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1			ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ry-Season Water aturation Visible o	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery (
Type:	rology Indicators: Itors (minimum of or Vater (A1) Per Table (A2) I (A3) Irks (B1) Deposits (B2) Isits (B3)	<u> </u>	check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alo)) ng Living Ro	* Secor — W — D — D — Si ots (C3) — G	ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ry-Season Water aturation Visible on eomorphic Positio	or more required) ves (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery (in (D2)
Type:	rology Indicators: stors (minimum of o vater (A1) er Table (A2) i (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4)	<u> </u>	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 nizospheres alor f Reduced Iron) ng Living Ro C4)	Secon W D Si ots (C3) G Si	ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ny-Season Water aturation Visible of eomorphic Positio hallow Aquitard (D	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2)
Type:	rology Indicators: tors (minimum of o Vater (A1) er Table (A2) er (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) sits (B5)	<u> </u>	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) sulfide Odor (C1 nizospheres alor f Reduced Iron i Reduction in Ti) ng Living Ro C4) lled Soils (C	Secor — W D D Si ots (C3) G Si 6) F,	ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ry-Season Water aturation Visible or eomorphic Positio hallow Aquitard (D AC, Neutral Test (D	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) 3)
Type:	rology Indicators: tors (minimum of o Vater (A1) er Table (A2) i (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	ne required	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alor f Reduced Iron i Reduction in Ti Stressed Plants) ng Living Ro C4) lled Soils (C	Secor — V — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2 Ater-Stained Leav 4A, and 4B) rainage Patterns (1 ry-Season Water aturation Visible of eomorphic Position hallow Aquitard (D Acg Neutral Test (I aised Ant Mourids	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	res): Port + Archiver (A1) er Table (A2) a (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) sits (B5) oil Cracks (B6) a Visible on Aerial II	ne required	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) sulfide Odor (C1 nizospheres alor f Reduced Iron i Reduction in Ti) ng Living Ro C4) lled Soils (C	Secon — W — D — D — Si ots (C3) — Si 6) — Fi	ndary Indicators (2 /ater-Stained Leav 4A, and 4B) rainage Patterns (ry-Season Water aturation Visible or eomorphic Positio hallow Aquitard (D AC, Neutral Test (D	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	res): Pology Indicators: Itors (minimum of or Vater (A1) er Table (A2) I (A3) rks (B1) Deposits (B2) Isits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial In Vegetated Concave	ne required	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alor f Reduced Iron i Reduction in Ti Stressed Plants) ng Living Ro C4) lled Soils (C	Secor — V — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2 Ater-Stained Leav 4A, and 4B) rainage Patterns (1 ry-Season Water aturation Visible of eomorphic Position hallow Aquitard (D Acg Neutral Test (I aised Ant Mourids	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	res): Pology Indicators: Itors (minimum of or Vater (A1) er Table (A2) I (A3) rks (B1) Deposits (B2) Isits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial In Vegetated Concave	ne required	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alor f Reduced Iron i Reduction in Ti Stressed Plants) ng Living Ro C4) lled Soils (C	Secon — W — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2 Ater-Stained Leav 4A, and 4B) rainage Patterns (1 ry-Season Water aturation Visible of eomorphic Position hallow Aquitard (D Acg Neutral Test (I aised Ant Mourids	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	rology Indicators: stors (minimum of or vater (A1) er Table (A2) i (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial In vegetated Concave stions:	ne required	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) sulfide Odor (C1 nizospheres alor f Reduced Iron Reduction in Ti Stressed Plants ain in Remarks)) ng Living Ro C4) lled Soils (C	Secon — W — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2 Ater-Stained Leav 4A, and 4B) rainage Patterns (1 ry-Season Water aturation Visible of eomorphic Position hallow Aquitard (D Acg Neutral Test (I aised Ant Mourids	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	rology Indicators: tors (minimum of o Vater (A1) er Fable (A2) er (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) oil Cracks (B6) er Visible on Aerial level (Vegetated Concaverations: Present?	magery (B7) Surface (B	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alor f Reduced Iron i Reduction in Ti Stressed Plants ain in Remarks)) ng Living Ro C4) lled Soils (C	Secon — W — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2 Ater-Stained Leav 4A, and 4B) rainage Patterns (1 ry-Season Water aturation Visible of eomorphic Position hallow Aquitard (D Acg Neutral Test (I aised Ant Mourids	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (55) (D6) (LRR A)
Type:	res): Prology Indicators: Itors (minimum of orvice (A1) Per Table (A2) (A3) rks (B1) Deposits (B2) Period (B4) Poils (B5) Poil Cracks (B6) Visible on Aerial Invegetated Concave Itions: Present? Yeresent? Yeresent?	magery (B7)	check all that apply Water-Stair MLRA 1 Salt Crust (Aquatic Inv. Hydrogen S Oxidized RI Presence o Recent Iron Stunted or S Other (Expl	ned Leaves (B9) , 2, 4A, and 4B B11) ertebrates (B13) Sulfide Odor (C1 hizospheres alor f Reduced Iron Reduction in Ti Stressed Plants ain in Remarks)) ng Living Ro (C4) lled Soils (C (D1) (LRR A	Secon — W — D — D — Si ots (C3) — Si 6) — Fi	Adary Indicators (2) Vater-Stained Leav 4A, and 4B) rainage Patterns (1) ry-Season Water alturation Visible of eomorphic Positio hallow Aquitard (D AC Neutral Test (D aised Ant Mourids ost Heave Hummi	or more required) res (B9) (MLRA 1, B10) Table (C2) n Aerial Imagery ((n (D2) (3) (5) (D6) (LRR A) bcks (D7)

positive alpha alpha at 5:

Remarks:

City/County: Mc	Kinleyville/thumboldtsampling Date: 1/25/202
•	State: CA Sampling Point: WI-T2-U
	p, Range TOON ROTESSITTINRIE
	cave, convex, none): Slove Stope (%): 10 %
/	Long: 174/15[4] Datum: LA 683
n / Arcata + Can	dymountainNWI classification: none
is time of year? Yes	No (If no, explain in Remarks.)
significantly disturbed?	Are "Normal Circumstances" present? Yes _ No
naturally problematic?	(If needed, explain any answers in Remarks.)
showing sampling po	oint locations, transects, important features, etc.
10_/	
No Is the San	mpled Area
No within a V	Vetland? Yes No
Idraul cambal	
	based on obs. Stil and ven
nts.	/
Absolute Dominant Indic	
	- Number of Dominant Species /
	That Are OBL, FACW, or FAC: (A)
	Total Number of Dominant
	Species Across All Strata: (B)
- Total Cavar	Percent of Dominant Species 50 0 (A/R)
= Total Cover	That rac obe, i noti, at the
	Prevalence Index worksheet:
	Total % Cover of: Multiply by.
	OBL species x1 =
	FACW species x2 = FAC species x3 = /3.5
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
= Total Cover	FACU species 45 x 4 = 180
1/20/	UPL species x5 =
- 45% WAS TAK	
	Prevalence Index = B/A = 3,5
- 570 - 77	- Injuries vigalians in industrial
1)	1 - Rapid Test for Hydrophylic Vegetation
	2 - Dominance Test is >50%
	() () () () () () () () () ()
	The state of the s
	5 - Wetland Non-Vascular Plants ¹
	Problematic Hydrophytic Vegetation ¹ (Explain) Indicators of hydric soil and wetland hydrology must
100	be present, unless disturbed or problematic.
Total Cover	
	Mudeophysia
	Hydrophytic Vegetation
	Present? Yes No V
= Total Cover	Present? Yes No
	Local relief (cond. Local relief (cond. Lat: 40.94777 Arata + Cambis time of year? Yes is time of year? Yes significantly disturbed? Inaturally problematic? showing sampling poly No Is the Sampling poly No Is the Sampling poly No Is the Sampling poly No Ints. Absolute Dominant India % Cover Species? Sta = Total Cover = Total Cover

541 155	pth needed to document the indicator or confirm	······································
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0212 02-10-125 1do		16-
2-19 10 v (31 98	7540 5/6	10an
16 30 70	75 5 8 75	
10/10/15	1070/8 -5	Tany
<u>FNO</u>	the s	The last
	7.5.0 52	
1		
Type: C=Concentration, D=Depletion, RM Type: C=Concentration, D=Depletion, RM Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coated Sand G	
		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present.
Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Redox Depressions (F8)	unless disturbed or problematic.
Type:		
Depth (inches):	- 1 5-	Hydric Soil Present? Yes No
emarks:		Tryanc contresent Tes No
twinter.		A STATE OF THE STA
1		
		*
YDROLOGY		2
Vetland Hydrology Indicators:	•	
rimary Indicators (minimum of one require		
	ed; check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	ACTUAL CONTRACTOR OF CONTRACTO	Secondary Indicators (2 or more required)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
☐ High Water Table (A2)☑ Saturation (A3)☐ Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (BI)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B1) Sparsely Vegetated Concave Surface (B1) Indid Observations: Urface Water Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B1) Indeposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B Sparsely Vegetated Concave Surface (B1) Indeposit Surface Surface (B2) Indeposit Surface Surface (B2) Sparsely Vegetated Concave Surface (B2) Indeposit Surface Surface (B3) Indeposit Surface Surface (B3) Indeposit Surface Surface (B3) Indeposit Surface Surface (B4) Indeposit Surface Surfac	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Its (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (Beld Observations: urface Water Present? Vater Table Present? Aturation Present? Aturation Present? Yes Includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetta	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) * Saturation Visible on Aerial Imagery (C9 des (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (Beld Observations: urface Water Present? Ves Vater Table Present? Atturation Present? Tes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (Beld Observations: urface Water Present? Vater Table Present? Aturation Present? Aturation Present? Yes Includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetta	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) * Saturation Visible on Aerial Imagery (C9 des (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Ield Observations: urface Water Present? Ves Vater Table Present? Auturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): Onitoring well, aerial photos, previous inspections),	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface (B) Indicated Water Present? Ves Vater Table Present? Auturation Pres	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6 Stunted or Stressed Plants (D1) (LRR A) Other (Explain in Remarks) No Depth (inches): No Depth (inches): Wetta	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) * Saturation Visible on Aerial Imagery (C9 des (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: South Hiller Road		City/County: McKin	legville/Humboldtsampling Date. 1/25/2023
Applicant/Owner. Life Plan Humbold+	3		State: CA Sampling Point: W2-W
Investigator(s): Miles Hartnet, Jane (77		
	,		convex none): slight unuave Slope (%): 5%
			Long: -124.1/1548Z Datum: 1/4/583
	/		
Soil Map Unit Name: Halfbluff-Tepona-Urban	/	/ 0	
Are climatic / hydrologic conditions on the site typical for this	time of year	ir? Yes No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si	ignificantly o	disturbed? Are	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally prol	olematic? (If n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	0		-1-Par
Hydric Soil Present? Yes No	·	Is the Sample	V 0111V-
Wetland Hydrology Present? Yes Ne	0	within a Wetla	nd? YesNo
Remarks: Cavex obnupta patch north	J fen	ce. Hydrol	ogy + vegetation = wetland
1- parameter sincle Mckingly	wille	Community &	las Not a USACE wetherd
VEGETATION – Use scientific names of plan	ts.	7	
	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2.			Total Number of Dominant
3			Species Across All Strata:
4.			Percent of Dominant Species // 0/
Sapling/Shrub Stratum (Plot size: 5 M		= Total Cover	That Are OBL, FACW, or FAC: 66 / 6 (A/B)
1. Juliy hookevilum	5%	LICE STATUS	Prevalence Index worksheet:
_	011	WS TACK	Total % Cover of: Multiply by:
2			OBL species x 1 =
4			FACW species x 2 =
4			FAC species x 3 =
		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: M)		- Total Cover	UPL species x 5 =
1. Carex obnueta	80%	WS OBL	Column Totals: (A) (B)
2. Gautheria Shalon	15%	FACU	Prevalence Index = B/A =
3. Eanisetum Jelmateia	5%	FACW	Hydrophytic Vegetation Indicators:
4.			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.01
7			4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants
10			Problematic Hydrophytic Vegetation¹ (Explain)
11	- —		Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.
	100	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	00	MOS FACU	
1. Rubus ircinus	11)	yes FACU	Hydrophytic
2			Vegetation Present? Yes No
% Bare Ground in Herb StratumO		= Total Cover	
Remarks:			

Profile Description: (Describe to the de	pth needed to document the indicator or co	nfirm the absence of indicate	ors.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Lo	Texture	Remarks
(0-10 10771 100		loan	8
10-13 10/13/2 95	7.5.15.18 6	100	
12 7/ 75 5/4 70	754318 30	- loan	
7-20 -77 31-1 70	100 1010 20	<u> </u>	
FIN			
			*
			363
			
	1=Reduced Matrix, CS=Covered or Coated Sar		Pore Lining, M=Matrix
Hydric Soil Indicators: (Applicable to al			lematic Hydric Solls ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A1)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Ma	
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (except MLR	· · · · · · · · · · · · · · · · · · ·	ark Surface (TF12)
Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Other (Explain i	n kemarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Indicators of budge	phytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		y must be present.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed	
Restrictive Layer (if present):	preside continues Visitating and M.T. Visitati		Franklinin
Type:			177
Type.			
		Hydric Soil Present?	Voc No
Depth (inches);		Hydric Soil Present?	Yes No
Depth (inches);Remarks:		Hydric Soil Present?	YesNo
Depth (inches);Remarks:		Hydric Soil Present?	YesNo
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators:		Hydric Soil Present?	YesNo
Depth (inches);Remarks:			Yes No.
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indica	tors (2 or more required)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	ed; check all that apply)	Secondary Indica	tors (2 or more required) d Leaves (B9) (MLRA 1, 2
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	ed; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indica	tors (2 or more required) d Leaves (B9) (MLRA 1, 2
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1)	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indica Water-Staine 4A, and 4 Drainage Pat	tors (2 or more required) d Leaves (B9) (MLRA 1, 2
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3)	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season N	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) Geomorphic Shallow Aqui	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ed: check all that apply) — Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) Geomorphic Shallow Aqui	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) Geomorphic Shallow Aqui (C6) FAC-Neutrat	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutral R A) — Raised Ant M	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutral R A) — Raised Ant M	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutral R A) — Raised Ant M	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B) Sparsely Vegetated Concave Surface Field Observations:	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutral R A) — Raised Ant M	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Based of the control	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutral R A) — Raised Ant M	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A)
Depth (inches); Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (E Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 37) Other (Explain in Remarks) (B8) No Depth (inches):	Secondary Indica Water-Staine 4A, and 4 Drainage Pai Dry-Season V Saturation Vi Roots (C3) Geomorphic Shallow Aqui (C6) FAC-Neutral R A) Raised Ant M Frost-Heave	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Based of the control	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 57) Other (Explain in Remarks) No Depth (inches): No No Depth (inches): No Depth (inches): No	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutrat R A) — Raised Ant M Frost-Heave	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Based of the control	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 37) Other (Explain in Remarks) (B8) No Depth (inches):	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutrat R A) — Raised Ant M Frost-Heave	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Pepth (inches); Remarks: AYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the primary Indicators (Maintenary Indicators (Maint	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 57) Other (Explain in Remarks) No Depth (inches): No No Depth (inches): No Depth (inches): No	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui (C6) — FAC-Neutrat R A) — Raised Ant M Frost-Heave	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)
Depth (inches); Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Based of the control	ed: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR 57) Other (Explain in Remarks) No Depth (inches): No No Depth (inches): No Depth (inches): No	Secondary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Roots (C3) — Geomorphic Shallow Aqui FAC-Neutrat R A) — Raised Ant M Frost-Heave	tors (2 or more required) d Leaves (B9) (MLRA 1, 2 B) terns (B10) Vater Table (C2) sible on Aerial Imagery (C Position (D2) tard (D3) Test (D5) lounds (D6) (LRR A) Hummocks (D7)

WETLAND DETERMINATION DA	ATA FORM - 1	Western Mou	ntains, Valleys, and Coast Region
Project/Site: South Hills Rd.	City/C	county: Mr Fin	Lyville/HUM Sampling Date: [13-T1-1
Applicant/Owner: CPH-LAC Man Humbol	1		State: CA Sampling Point: 131/7623
Investigator(s): Miles Hocholl, Moha Schl	I/I/ Section	on, Township, Ra	nge: 56 TON RIE
			convex, none): CONCAIM Slope (%): 0-2
			Long: -124 MS(M) Datum: WAD 83
Soil Map Unit Name: HA FOUT TOMA -(11)	un Arute s	Cardenay	NWI classification:
Are climatic / hydrologic conditions on the site typical for th	is time of year? Y	'es <u>X</u> No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology		1	Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	5 U.S. 35		eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sam	pling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes t	No <u> </u>		1-766
Hydric Soil Present? Yes !		Is the Sampled within a Wetlar	
Wetland Hydrology Present? Yes X	Vo	WILLIIII & WELLA	765
- Not a USACE without	nrkinlepille.	e Community	1 Plan.
VEGETATION – Use scientific names of plan	nts.		
		ninant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 1-30)	% Cover Spe	OG UPL	Number of Dominant Species
1. tucaly Atus alonulus		09 (116	That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant
4			Species Across All Strata: (B)
The state of the s	VU = To	tal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:		A.7	That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1. Elicatorias albantus	<u> (10 y</u>	19 INL	Total % Cover of: Multiply by:
2			OBL species x 1 =
3			FACW species x 2 =
4			FAC species x3 =
5			FACU species 86 x 4 = 3 3 5 7
Herb Stratum (Plot size:	<u>(n/)</u> = To	tal Cover	UPL species 110 x 5 = 570
1. Anthoxan Hour edmatum	80 1	15 FAGU	Column Totals: 198 (A) 907 (B)
2. INTIA SALJU	5 W	0.1	Prevalence Index = B/A = 4.56
3. Copranium discontin	5 10	UPL	Hydrophytic Vegetation Indicators:
4. Galiha aparini	5 K	FACULARE	1 - Rapid Test for Hydrophytic Vegetation
5. Runey admelle	3 111	5 FAC-U	2 - Dominance Test is >50% Tail
6.			3 - Prevalence Index is ≤3.0¹ —
7.			4 - Morphological Adaptations (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11.	- 00		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	<u>4 ★</u> = Tot	ai Cover	200 (200 (200 (200 (200 (200 (200 (200
1			Hydrophytic
2.			Vegetation
	= To!	al Cover	Present? Yes No
% Bare Ground in Herb Stratum			
Remarks:			The control of the co
most, careced (80%) En	calyouth.	dititus	2

C ()	

Sampling Point: W3-TI-W

Depth	Matrix		Redo	x Feature	S			and the state of t
(inches)	Color (maist)	%	Color (moist)			Loc ²	<u>Texture</u>	Remarks
0-10	10-11-211	Inn) Olim	92
10-16	10/10/1	91	541 5/8	<			5047/cm	
FR W	1071711	- /) -	591 010				- TITLES	
V NY								
	2	200						
			,	*	2	x. X	-	
					c. 			

Type: C=Cor	ncentration D=Der	oletion RM=	Reduced Matrix, C	S=Covere	d or Coale	d Sand Gr		tion: PL=Pore Lining, M=Matrix.
			LRRs, unless othe			d Sand Gr		s for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (· · · · · ·			AND THE PROPERTY OF THE PARTY O
The state of the s	pedon (A2)		Stripped Matrix					Muck (A10) Parent Material (TF2)
Black His		1	Loamy Mucky		1) /avcani	MI DA 1		Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed		_ 60 AC (160)	WILLIAM I)		(Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matri		,		00060	(Cxpiair iii Nemarks)
THE STATE OF THE S	rk Surface (A12)	(* * * * * * * * * * * * * * * * * *	Redox Dark Su				3 Indicators	of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark					d hydrology must be present.
	eyed Matrix (S4)		Redox Depress		.,			disturbed or problematic.
	ayer (if present):						T	
Type:								
The state of the s	hes):						Hydric Sail D	resent? Yes X No
							Trydric don't	resent res
Remarks:								
YDROLOG	GY		-					
Wetland Hydi	rology Indicators:							
rimary Indica	ators (minimum of c	one required	; check all that appl	(v)			Second	ary Indicators (2 or more required)
Surface V	Vater (A1)		Water-Sta	ined Leave	es (B9) (e:	xcept	⊁ Wa	ter-Stained Leaves (B9) (MLRA 1, 2,
X High Wate	er Table (A2)			1, 2, 4A, a		0.000		4A, and 4B)
X Saturation			Salt Crust					inage Patterns (B10)
Water Ma	20 12 12 12 12 12 12 12 12 12 12 12 12 12		Aquatic In		s (B13)		7	-Season Water Table (C2)
The second and the second	Deposits (B2)		Hydrogen					uration Visible on Aerial Imagery (C9)
Drift Depo						Living Root	100	
	or Crust (B4)					Living Root	3 2 3 March	omorphic Position (D2)
Iron Depo	COOP) 1 Soils (C6)		allow Aquitard (D3)
	Soil Cracks (B6)					and the second of the	· · · · · · · · · · · · · · · · · · ·	C-Neutral Test (D5)
	n Visible on Aerial	lmagas, (D7				1) (LRR A)	8	sed Ant Mounds (D6) (LRR A)
	Vegetated Concavi			olain in Re	marks		— Fro	st-Heave Hummocks (D7)
		e Surrace (b	10)					
ield Observa			. × -	w 500				
Surface Water		'es N	lo <u> </u>	ches):	. /			
Nater Table P	resent? Y		lo Depth (in		4			¥
Saturation Pre		'es 🔼 N	lo Depth (in	ches):	₽	_ Wetla	ınd Hydrology l	Present? Yes <u>X</u> No
includes capil Describe Reco		gauge, moi	nitoring well, aerial	photos pre	evious inc	pections) i	f available	2000-2000-20
		33-,	morning work control	priotoo, pri	011000 1110	peellons), i	a valiable.	
Remarks:	*		-					
		1	1					
107	10situe &	or you	a+ 12"					9
A	V							

11 h A		M – Western Mou		
roject/Site: Set Mile Ki		City/County: Mr. K.I	Narile/HUM	Sampling Date: 1/31/2023
pplicant/Owner: LPH - Life Pkn Hubi	UL .		State: <u>CA</u>	Sampling Point: W3-T1-1.
vestigator(s): M.U.S. Hachurt. M.Shu <	Sola Waz	Section, Township, Ra	inge: 56 T60	ROE
andform (hillstope, terrace, etc.):				
ubregion (LRR):	Lat: 40	941740	Long: -724,655	74 Datum: NAD8
oit Map Unit Name: HI Tout Topon a - Ush	m Accordat	Condimenter	NWI classific	ation:
re climatic / hydrologic conditions on the site typical for	or this time of yea	ar? Yes No _	(If no, explain in R	emarks.)
re Vegetation, Soil, or Hydrology	significantly	disturbed? Are	"Normal Circumstances" p	present? Yes No
re Vegetation, Soil, or Hydrology	naturally pro	blematic? (If no	eeded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS - Attach site n	nap showing	sampling point l	ocations, transects	, important features, et
Hydrophytic Vegetation Present? Yes	NoX	Section with the section of the sect		/
	No V	Is the Sampled	d Area nd?	No X
Wetland Hydrology Present? Yes	_ NoX	***************************************	163	
Remarks:			*	3.10
EGETATION – Use scientific names of p	nlants			
<u></u>	Absolute	Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant S	
1. Furchions globalus	40	785 UIC	That Are OBL, FACW,	or FAC: (A)
2.			Total Number of Domin	
3		0.5	Species Across All Stra	ita: (B)
	Un	= Total Cover	Percent of Dominant Sp That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:	,		Prevalence Index wor	- St 20
1. Fuel oths alphalus	35	VILS UIL	Total % Cover of:	
2. '				x1=
3			/4	x 2 =
4 5			10.	x 3 =
	35	= Total Cover	13/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04/19/04	x 4 =
Herb Stratum (Plot size:)	~		2577	x5=
1. Ermlunia Hhm Garrillia	90	V/5 HACK	Column Totals:	(A) (B)
2. Brza maxina 3. 147 in satur	10	n 11PL		= B/A =
4. Quant account	4	ru FACH	Hydrophytic Vegetation	
5. Alland of section	3	h. MOL	1 - Rapid Test for I	Hydrophytic Vegetation
6. Color and and		nu FACH	3 - Prevalence Inde	
7.				Adaptations ¹ (Provide supportin
8.			data in Remarks	s or on a separate sheet)
9			5 - Wetland Non-V	
10			M. C.A.	phytic Vegetation ¹ (Explain)
11:	/		Indicators of hydric soil be present, unless distri-	l and wetland hydrology must
Woody Vine Stratum (Plot size: 6/6)	114	= Total Cover		- Province
			Hydrophytic	
1.			Vegetation	1
1				
1		= Total Cover		s No

Depth (inches)	Matrix			x Features			the absen		3
00	Color (moist)	- %	Color (moist)		_Type ¹	Loc²	Texture		Remarks
U-7)	16,13/2.5	100					1 mm		19
8-16	10,12/2	100	-				j ,	-	1 6 7 mg
,-110	1	1000			·——		Icam	N. 9	- 14 mm
F MIII							_		Y-8-1
				777	/s. ANN	00000-20			
					· · · · · · · · · · · · · · · · · · ·		<u> </u>		
								-	
									Y
0.10.21									
Type: C=Conc	entration, D=Depl	etion. RM=Re	duced Matrix, CS	=Covered	or Coale	d Sand Gr	ains 21	ocation: PI	=Pore Lining, M=Matrix.
lydric Soil Ind	icators: (Applica	bie to all LRI	Rs, unless other	wise note	ed.)	u ound on	The second leaves and the second leaves are second leaves and the second leaves are second leaves and the second leaves are second leaves		blematic Hydric Soils ³ :
Histosol (A			Sandy Redox (S					cm Muck (A	The state of the s
Histic Epipe	1.5%	_	Stripped Matrix					ed Parent Ma	
Black Histic		_	Loamy Mucky N	and the second) (excent	MLRA 1)			Dark Surface (TF12)
Hydrogen S		_	Loamy Gleyed			WILLIAM 1)		1973 August 1971	in Remarks)
	elow Dark Surface	(A11)	Depleted Matrix	CONTRACTOR STATE			_	tres (Explain	iii i tomanaj
	Surface (A12)		Redox Dark Sur				3Indica	itors of hydro	phytic vegetation and
Sandy Mucl	ky Mineral (S1)		Depleted Dark S	Surface (F	7)				gy must be present.
_ Sandy Gley	ed Matrix (S4)	_	Redox Depressi	ons (F8)	Ā				or problematic.
estrictive Lay	er (if present):								
Type:			_						
Depth (inche	s):						Hydric Sc	il Present?	YesNo
DROLOGY	-	-							
etland Hydro	logy Indicators:	_	10						
rimary Indicato	rs (minimum of on	e required; ch	neck all that apply	1)			Sec	ondary Indic	ators (2 or more required)
_ Surface Wa			Water-Stair		s (B9) (ex	rcent			ed Leaves (B9) (MLRA 1,
High Water		9	NUL 0771 (00007) (00107) (0	, 2, 4A, a	1987 18 18	copt	_	4A, and	AND COMPANY OF THE PARTY OF THE
_ Saturation (and the second s	1	Salt Crust (10 407				(2 € 1 € 1 € 1 € 1 € 1 € 1 € 1 € 1 € 1 €
_ Water Mark		A Service	Aquatic Inv	2000	(D12)				itterns (B10)
			Hydrogen S						Water Table (C2)
Sediment D		20				tidas Basi			isible on Aerial Imagery (C
_ Sediment D		2 1 1 1 1 1	Oxidized R					Minera on Sara	Position (D2)
_ Drift Deposi		E .	Dragamen e					Shallow Aqu	
_ Drift Deposi _ Algal Mat or	Crust (B4)	11	Presence o		DALLES NAMES OF THE OWNERS	~		(9)	
Drift Deposi Algal Mat or Iron Deposit	Crust (B4) ts (B5)	1	Recent Iron	Reductio	n in Tilled	Soils (C6)	_	FAC-Neutra	Test (D5)
Drift Deposi Algal Mat or Iron Deposit Surface Soil	Crust (B4) Is (B5) I Cracks (B6)	10000 (P.7)	Recent Iron Stunted or	n Reductio Stressed F	n in Tilled Plants (D1	Soils (C6)	_	FAC-Neutra Raised Ant I	Test (D5) Mounds (D6) (LRR A)
Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation	Crust (B4) Is (B5) I Cracks (B6) /isible on Aerial In		Recent Iron	n Reductio Stressed F	n in Tilled Plants (D1	Soils (C6)	_	FAC-Neutra Raised Ant I	Test (D5)
Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Ve	Crust (B4) Is (B5) I Cracks (B6) Visible on Aerial In getated Concave		Recent Iron Stunted or	n Reductio Stressed F	n in Tilled Plants (D1	Soils (C6)	_	FAC-Neutra Raised Ant I	Test (D5) Mounds (D6) (LRR A)
Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Ve	Crust (B4) Is (B5) I Cracks (B6) /isible on Aerial Ingetated Concave	Surface (B8)	Recent Iron Stunted or Other (Expl	n Reductio Stressed f lain in Ren	n in Tilled Plants (D1 narks)	Soils (C6)) (LRR A)	_	FAC-Neutra Raised Ant I	Test (D5) Mounds (D6) (LRR A)
Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Veield Observati	Crust (B4) Is (B5) I Cracks (B6) /isible on Aerial Ingetated Concave ons: Present? Ye	Surface (B8)	Recent Iron Stunted or Other (Expl	n Reductio Stressed f lain in Ren hes):	n in Tilled Plants (D1 narks)	Soils (C6)) (LRR A)	_	FAC-Neutra Raised Ant I	Test (D5) Mounds (D6) (LRR A)
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Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Veield Observati urface Water P later Table Presenctudes capillar	Crust (B4) Is (B5) I Cracks (B6) Visible on Aerial Inegetated Concave ons: Veresent? Yesent? Yesent? Yesent?	Surface (B8) s No _ s No _ s No _	Recent Iron Stunted or Other (Expl	n Reduction Stressed Falain in Rem hes): hes): hes):	n in Tilled Plants (D1 narks)	Soils (C6)) (LRR A) Wetla	nd Hydrolo	FAC-Neutra Raised Ant I Frost-Heave	Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
Drift Deposi Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsety Veiled Observati urface Water P /ater Table Presenctudes capillatescribe Record	Crust (B4) Is (B5) I Cracks (B6) Visible on Aerial Integetated Concave ons: Versent? Versent? Very fringe)	Surface (B8) s No _ s No _ s No _	Recent Iron Stunted or Other (Expl	n Reduction Stressed Falain in Rem hes): hes): hes):	n in Tilled Plants (D1 narks)	Soils (C6)) (LRR A) Wetla	nd Hydrolo	FAC-Neutra Raised Ant I Frost-Heave	Test (D5) Mounds (D6) (LRR A) Hummocks (D7)
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Project/Site: South Hiller Road	City/County:	McKinlegville/Humbolo	+Sampling Date: 1/25/202
Applicant/Owner: Life Plan Humbold		State: CA	Sampling Point: UP
Investigator(s): Miles Hartnet, Jane			
Landform (hillslope, terrace, etc.): Magne Lerra			
Subregion (LRR): WMVC-LRR-A	, , ,		
Soil Map Unit Name: Halfbluff-Tepona-Urba	n/Avata+1	andy mountain NWI classifi	cation Nove
Are climatic / hydrologic conditions on the site typical for the			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site map			
Hydrophytic Vegetation Present? Yes		, ponterodationa, transcoo	5, 111,011.011.110.00.010.
Hydric Soil Present? Yes		Sampled Area	
Wetland Hydrology Present? Yes		n a Wetland? Yes	No_V
Remarks:			
Clearly upland at edge of	& Encalyptus	grove.	
VEGETATION – Use scientific names of pla	nts.		
To Charles (District	Absolute Dominant		ksheet:
Tree Stratum (Plot size:) 1		That Are OBL, FACW	
2		Total Number of Domi	nant /
3			19972143 A
4	= Total Cov	Percent of Dominant S That Are OBL, FACW.	
Sapling/Shrub Stratum (Plot size: 5 M	701	Prevalence Index wo	
1. Eucalyptis	5/0	Total % Cover of:	Multiply by:
2			x 1 =
3.		1 12-1 22-1 1 1000 alter (4-1,0)	x 2 =
4		A COLOR DE LA COLO	x 3 =
5.			x 4 =
1 14	= Total Cov	/er	
Herb Stratum (Plot size: / M)	9201		x 5 =
1. Briza maxima	93% yes	OT L Column Totals.	(A) (B)
2. Hypochueris radicata	- 100	Prevalence Inde	x = B/A =
3. Storrlys asper	10/0	Hydrophytic Vegetat	ion Indicators:
4. Geranium dissectum	10/0	1 Danid Tast for	Hydrophytic Vegetation
5. Ptevilium	3°/2	2 - Dominance Te	est is >50%
6			dex is ≤3.01
7		4 - Morphological	Adaptations ¹ (Provide supporting ks or on a separate sheet)
8.		5 - Wetland Non-	
9			ophytic Vegetation ¹ (Explain)
10			oil and wetland hydrology must
11	100 = Total Cov		turbed or problematic
Woody Vine Stratum (Plot size:)		***	
1		Hydrophytic	
2		Vegetation	/
	= Total Cov	er Present? Y	es No
% Bare Ground in Herb Stratum	economic no missional superior and a		
Remarks			
			-

0	21	n
31	JI	L

Sampling Point: UP-1

Golder (moles) % Type Loc Teature Remarks Type C	Depth	Matrix		Redo	x Feature:	S				
Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Typer: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Telephone Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) C2 cm Muct (A10) Black Histol (A2) Sinpped Matrix (S6) Black Histol (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Depleted Bolivo Dark Surface (A11) Depleted Matrix (F2) Depleted Bolivo Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyd Matrix (S4) Redox Depressions (F8) Restrictive Layer (if present): Type: Depth (inches): Hydrice Soil Present): Type: Depth (inches): Hydrice Soil Present): Type: Depth (inches): Water Marks (S1) Aguatic Invertebrates (B13) Depleted Soil Rules (B1) Depl	(inches)	Color (moist)	<u>%</u>	Color (moist)	%	_Type'	_Loc ²		Rema	arks
Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Coated Sand Grains Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered Ma	0-12	10-13/3	100			Till		1000		
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Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)				LET'S						
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Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)					-					
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)		717								
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Type: C=Cor	ncentration, D=Dep	letion. RM=R	educed Matrix, CS	S=Covered	or Coate	d Sand Gr	ains Zloca	tion: PI =Pore I ini	no M-Matrix
Histosol (A1) Histosol (A2) Histosol (A2) Sinipped Matrix (S8) Histosol (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Pydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Trick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Seleyed Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Depleted Dark Surface (F5) Sandy Mucky Mineral (S1) Pedox Dark Surface (F6) Sandy Seleyed Matrix (S4) Redox Dark Surface (F7) Depleted Dark Surface (F7) Sandy Seleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water Stained Leaves (B9) (except Mark (B1) Water Table (A2) MuRA 1, 2, 4A, and 4B) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Water Marks (B1) Aquatic Invertebrates (B13) Apuatic Invertebrates (B13) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Solt Cracks (B6) Iron Deposits (B5) Recent Iron Reduction in Titled Solis (C6) Surface Solt Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface Solt Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface Water Present? Yes No Depth (inches): Water Alain In Remarks) Water Alain In Remarks Presented F7 Water Alain In Remarks Presented F7 Surface Solt Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface Water Present? Yes No Depth (inches): Water Ala, and 4B) Drainage Patterns (B10) Water Ala, and 4B) Drainage Patterns (B10) Secondary Indicators (2 or more required. Water Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) S	Hydric Soil Ir	dicators: (Applic	able to all Li	RRs, unless othe	rwise note	ed.)	a cana on			
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Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Pepleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) Aquatic Invertebrates (B13) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Dry Season Water Table (C2) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (O2) Aqual Mat or Crust (B4) Presence of Reduced fron (C4) Shallow Aquilard (D3) Introduced to Accept Introduced Concave Surface (B1) Depth (inches): Surface Soil Cracks (B6) Surface (B1) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B1) Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Water Table (C2) Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table (R2) Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wate			7 7		S				Strain a see a see and the second of the second	2)
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Sandy Mucky Mineral (51) Depleted Dark Surface (F7) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water Table (A2) A4, and 4B) Saturation (A3) Satt Crust (B11) Drainage Patterns (B10) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imager (B2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Sparsely Vegetaled Concave Surface (B8) Field Observations: Surface Note Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland hydrology must be present, unless disturbed or problematic. wetland hydrology must be present, unless disturbed or problematic. wetland hydrology must be present, unless disturbed or problematic. wetland hydrology must be present, unless disturbed or problematic. hydros Soil Present? Yes No Depth (inches): Wetland Hydrology must be present, unless disturbed or problematic. wetland hydrology must be present, unless disturbed or problematic. No Secondary Indicators (2 or more require disturbed or problematic. No Secondary Indicators (2 or more require disturbed or preduire sequence.) Water Table (A1) Water Table (A2) Wetland Hydrology Present? Yes No Depth (inches):			1000					3Indicator	s of hydrophytic vec	netation and
Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present):						7)				
Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes						-			100	57
Depth (inches): Hydric Soil Present? Yes No Remarks: Hydric Soil Present? Yes No No	Restrictive La	yer (if present):							produc	2
Depth (inches): Hydric Soil Present? Yes No Remarks: Applicators Primary Indicators P			17.							
Applicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA High Water Table (A2) MLRA 1, 2, 4A, and 4B) A4, and 4B) A4, and 4B) A4, and 4B) Dry-Season Water Table (C2) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Adjated Phizospheres along Living Roots (C3) Saturation Visible on Aerial Imager (D2) Adjated National Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B3) Presence of Reduced Iron (C4) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Iron Deposits on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Depth (inches) Water Table Present? Yes No Depth (inches) Wetland Hydrology Present? Yes No Depth (inches) Wetland Hydrology Present? Yes No Depth (inches) Wetland Hydrology Present? Yes No Depth (inches) Remarks Presented (Stressed Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								Under Care		\
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Project/Site South Hiller Road City/County: McKin	legville/thumboldtsampling Date: 1/25/2023
Applicant/Owner: Life Plan Humbold+	
Investigator(s) Miles Hartnet, Jane Cipra Section, Township, Rai	
Landform (hillstope, terrace, etc.): Wer.hi Jerreu Local relief (concave, o	
Subregion (LRR): WMVCLRR-A Lat: 40.94080	Long: -124,164919 Datum: 114083
Soil Map Unit Name Halfbluff-Tepona-Urban / Arcata + Candyn	nountain NWI classification: none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "	Normal Circumstances" present? Yes No
	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No V Is the Sampled within a Wetlan	
vveiland Hydrology Present?	165 ND
Remarks:	
VEGETATION – Use scientific names of plants.	
Absolute Dominant Indicator Tree Stratum (Plot size) % Cover Species? Status	Dominance Test worksheet:
1	Number of Dominant Species / That Are OBL, FACW, or FAC: (A)
2	
3,	Total Number of Dominant Species Across All Strata (B)
4	
Sapling/Shrub Stratum (Plot size:) = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 58 % (A/B)
1	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3.	OBL species x 1 =
4	FACW species x2 =
5	FAC species 30 $x3 = 90$ FACU species 62 $x4 = 248$
= Total Cover	
Herb Stratum (Plot size: M)	UPL species
1. The order is validated to	And the second s
	Prevalence Index = B/A = 3, 67
3. Anthoxanthum odoratum 50°6 108 FACU 4. Agrostis Stolonitera 30°6 108 FAC	Hydrophytic Vegetation Indicators:
	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.0¹
7,	4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
9.	5 - Wetland Non-Vascular Plants
10	Problematic Hydrophytic Vegetation ¹ (Explain)
11	Indicators of hydric soil and wetland hydrology must
92 = Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	
1	Hydrophytic
2	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 8 % = Total Cover	162 140 V
Remarks:	

en.	-	
100	F 11	
-	~"	ll-m

Sampling Point: 4PZ

That the same of t	epth needed to document the indicator or confi	rm the absence of inc	iicators.)
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type Loc²	- Touture	Damaska
	Color (moist)	Texture	Remarks
0.72 hox 33 100		(Olman	**
12-10 10-1/413 40	341519 10 C M	10m	
16-23 25-614 70	5-1-618 30 C M	chylan	
1 500			
		-	· · · · · · · · · · · · · · · · · · ·
		<u> </u>	
¹Type: C=Concentration, D=Deptetion, R	M=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a			Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Mucl	(A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		nt Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA		ow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Exp	plain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	10 DO 0 20	
Thick Dark Surface (A12)	Redox Dark Surface (F6)		ydrophytic vegetation and
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)		Irology must be present,
Restrictive Layer (if present):	Redux Deplessions (F6)	uniess disti	rbed or problematic.
Type:			
Depth (inches):		Hydric Soil Prese	int? Yes No.
		I HAMILL DOME LIESE	nt? Yes No.X
Remarks:			
HYDROLOGY			
HYDROLOGY Wetland Hydrology Indicators:	b =		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	CONSTANT AND STATE OF	Secondary I	ndicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the surface Water (A1)	Water-Stained Leaves (B9) (except	Secondary I	Stained Leaves (B9) (MLRA 1,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary I Water-S 4A, a	stained Leaves (B9) (MLRA 1, 2 and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary I Water-S 4A, a	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary I Water-S 4A, a Drainag Dry-Sea	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) son Water Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirum of one r	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (C
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living References	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (C phic Position (D2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomor	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ason Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Researce of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomor Shallow C6) FAC-Ne	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) autral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Titled Soils (C4) Stunted or Stressed Plants (D1) (LRR	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR) (B7) Other (Explain in Remarks)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) autral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirum of one r	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR) (B7) Other (Explain in Remarks)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (C phic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required one sequired of the sequ	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR (B7)) (B8)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (C phic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required one sequired one sequir	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Titled Soils (C4) Stunted or Stressed Plants (D1) (LRR (B7) Other (Explain in Remarks) (B8)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (C phic Position (D2) Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirum of one r	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Case) Stunted or Stressed Plants (D1) (LRR Details of Case) (B7) Other (Explain in Remarks) (B8)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised Frost-He	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Case) Stunted or Stressed Plants (D1) (LRR Details of Case) (B7) Other (Explain in Remarks) (B8)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) Geomo Shallow C6) FAC-Ne A) Raised	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required one sequired of the sequ	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Case) Stunted or Stressed Plants (D1) (LRR Details of Case) (B7) Other (Explain in Remarks) (B8)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) — Geomor Shallow C6) — FAC-Ne A) — Raised Frost-He	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the property of the p	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Represence of Reduced Iron (C4) Recent Iron Reduction in Titled Soils (C4) Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) (B7) Depth (inches): No Depth (inches): Water (B9)	Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) — Geomor Shallow C6) — FAC-Ne A) — Raised Frost-He	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required one superior of the primary Indicators (minimum of one required one superior of the primary Indicators (Material of the prim		Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) — Geomor Shallow C6) — FAC-Ne A) — Raised Frost-He	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required one superior of the primary Indicators (minimum of one required one superior of the primary Indicators (Material of the prim		Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) — Geomor Shallow C6) — FAC-Ne A) — Raised Frost-He	Stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the property of the p		Secondary I Water-S 4A, a Drainag Dry-Sea Saturati oots (C3) — Geomor Shallow C6) — FAC-Ne A) — Raised Frost-He	stained Leaves (B9) (MLRA 1, 2 and 4B) e Patterns (B10) ison Water Table (C2) on Visible on Aerial Imagery (Caphic Position (D2) Aquitard (D3) intral Test (D5) Ant Mounds (D6) (LRR A) eave Hummocks (D7)

Applicant/Owner: Life Plan Humbold+ Investigator(s): Miles Hartnet, Jane Cip Landform (hillslope, terrace, etc.): Macri Leccus Subregion (LRR): WMVC-LRR-A Soil Map Unit Name: Halfbluff-Tepona-Urban Are climatic / hydrologic conditions on the site typical for this tim	Local at: 41.9468	n, Township, Ran relief (concave, c	State: CA Sampling Point: UP3 age: TOWN ROTE 56 convex. none): Slope (%): 5% Long: 174, 106718 Datum: MADRS Adultain NWI classification: None
Are Vegetation, Soil, or Hydrology signi	ificantly disturt	ed? Are "I	Normal Circumstances" present? Yes No
Are Vegetation, Soil or Hydrology natur			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	155.750		
Hydrophytic Vegetation Present? Yes No _			
Hydric Soil Present? Yes No		Is the Sampled	Area
Wetland Hydrology Present? Yes No _		within a Wetlan	d? Yes No/_
Remarks			
Azel veg remark below			
VEGETATION - Use scientific names of plants.			
- No. 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Cover Spec	inant Indicator cies? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
2			Total Number of Dominant
3			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= Tot	al Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5			FAC species 75 x 3 = 225
	= Tol	al Cover	FACU species x 4 = 80
Herb Stratum (Plot size: M)			UPL species x 5 = Column Totals: 100 (A) 305 (B)
1. Dancus Carota	5%	FACU	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	70% 40 5%		Prevalence Index = B/A = 3.05
3. Hypochapiis vadicata	5%	FACU	Hydrophytic Vegetation Indicators:
4. Faltura arundinacea	8%	FAL	1 - Rapid Test for Hydrophytic Vegetation
	2%	FACI	✓ 2 - Dominance Test is >50% PASS
		FALU	3 - Prevalence Index is ≤3.0¹ †△ _
7			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8			5 - Welland Non-Vascular Plants ¹
9			Problematic Hydrophytic Vegetation¹ (Explain)
10			Indicators of hydric soil and wetland hydrology must
"-	95 - Tal	al Cover	be present, unless disturbed or problematic
Woody Vine Stratum (Plot size:)	-101	ai Covei	
1			Hydrophytic
2			Vegetation
C0/	= Tot	al Cover	Present? Yes No_V
% Bare Ground in Herb Stratum 50/0			The same of the sa
Remarks: - Saidle print contexts don	n. FACT	Thusile Sp	1p. and other FACU SOP.
- No hyacology or soil sail oneum	lau in	lux - Dele	much not to be historiated

Depth	Matrix			Features		_			
(inches)	Color (moist)		Color (moist)	<u> % Tyr</u>	pe¹ Loc²	Text	ure	Rema	arks
0-14	1045313	100	5 ===					10070	
14-18	10.1313	92	1,5455/6	_8				-Famt	
187,4	12/13/4	70	75501018	371					
Dia			111					-	
-UNY	-					_		Wa.	
	* *		*						
Tune: C=Ce	posterios D-D-)						
Hydric Soil Ir	ndicators: (Appli	pieuon, raivi=r cable to all I l	Reduced Matrix, CS	wise noted)	oated Sand	THE PARTY AND THE PARTY IN THE		n: PL=Pore Lini or Problematic	
Histosol (_ Sandy Redox (S	A7.000		1111			riyaric Solis";
	pedon (A2)	** <u></u>	Stripped Matrix (353		-		ick (A10)	ns.
Black His		8-	_ Loamy Mucky M		cent MI PA	1)		ent Material (TF: allow Dark Surfa	
	Sulfide (A4)	0	Loamy Gleyed M		-shrain-IVA	·/ –		anow Dark Suna xplain in Remarl	200
	Below Dark Surface	ce (A11)	_ Depleted Matrix			20	(1)(1)(1)	voleni ni Kelliah	na)
	k Surface (A12)		Redox Dark Surl			3 _{ln}	dicators of	hydrophytic veg	retation and
Sandy Mu	icky Mineral (S1)	<u> </u>	Depleted Dark S					ydrology must be	
Sandy Gl	eyed Matrix (S4)		_ Redox Depression	ons (F8)				turbed or proble	100
Restrictive La	ayer (if present):							**************************************	
Type:		22.00	_						
	nes):					Hydrid	c Soil Pres	sent? Yes	No
	nes):					Hydrid	c Soil Pre	sent? Yes	No
Depth (inch Remarks:					121	Hydrid	c Soil Pre	sent? Yes	No
Depth (inch Remarks: YDROLOG					-	Hydri	c Soil Pre	sent? Yes	No
Depth (inch Remarks: IYDROLOG Wetland Hydi	SY rology Indicators		check all that apply				_		
Depth (inch Remarks: IYDROLOG Wetland Hydi Primary Indica	ology Indicators:		check all that apply	Alleys Trouble) (except		Secondary	r Indicators (2 or	more required)
Depth (inch Remarks: IYDROLOG Wetland Hydi Primary Indica Surface W	ology Indicators: tors (minimum of d		Water-Stain	ed Leaves (B9			Secondary Water	r Indicators (2 or Stained Leaves	
Depth (inch Remarks: IYDROLOG Wetland Hydi Primary Indica Surface W High Wate	ology Indicators: tors (minimum of d dater (A1) er Table (A2)		Water-Stain MLRA 1	ed Leaves (B9 , 2, 4A, and 4 E			Secondary Water 4A	Indicators (2 or Stained Leaves and 4B)	more required) (B9) (MLRA 1,
Depth (inch Remarks: IYDROLOG Wetland Hydi Primary Indica Surface W High Wate Saturation	ology Indicators: stors (minimum of a later (A1) er Table (A2)		Water-Stain MLRA 1 Salt Crust (I	ed Leaves (B9 , 2, 4A, and 4 E 311)	3)		Secondary Water 4A Draina	Indicators (2 or Stained Leaves , and 4B) ge Patterns (B1	more required) (B9) (MLRA 1,
Depth (inch Remarks: YDROLOG Wetland Hydi Primary Indica Surface W High Wate Saturation Water Ma	rology Indicators: tors (minimum of d later (A1) er Table (A2) i (A3) rks (B1)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ed Leaves (B9, 2, 4A, and 4 B 311) ertebrates (B13	3)		Secondary Water 4A Draina Dry-Se	Indicators (2 or Stained Leaves , and 4B) ige Patterns (B1 eason Water Tat	more required) (B9) (MLRA 1, 3)
Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indica Surface W High Wate Saturation Water Ma Sediment	rology Indicators: tors (minimum of a later (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ed Leaves (B9, 2, 4A, and 4B 311) ertebrates (B13 ulfide Odor (C	3) 3) 1)		Secondary Water 4A Draina Dry-Se Satura	Indicators (2 or Stained Leaves and 4B) age Patterns (B1 eason Water Tat	more required) (B9) (MLRA 1, 1) 0) ple (C2) verial Imagery (C
Depth (inch Remarks: YDROLOG Wetland Hydromary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo	rology Indicators: tors (minimum of older (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ed Leaves (B9, 2, 4A, and 4B 311) ertebrates (B13 ulfide Odor (C aizospheres ald	3) 3) 1) pag Living Re	oots (C3)	Secondary Water 4A Draina Dry-Se Satura Geom	Indicators (2 or Stained Leaves , and 4B) ge Patterns (B1 eason Water Tat tion Visible on A orphic Position (more required) (B9) (MLRA 1, 1) 0) ple (C2) verial Imagery (C
Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo	tors (minimum of of value (A1) er Table (A2) in (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt	ed Leaves (B9, 2, 4A, and 4E 311) ertebrates (B13 ulfide Odor (C aizospheres ald Reduced Iron	3) 1) ong Living Ro (C4)	oots (C3)	Secondary Water 4A Draina Dry-Se Satura Geom Shallo	r Indicators (2 or Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3)	more required) (B9) (MLRA 1, 20) (B9) (C2) (C2) (C3) (C4)
Primary Indica Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo	rology Indicators: tors (minimum of of vater (A1) er Table (A2) in (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leaves (B9, 2, 4A, and 4E 311) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in 1	3) 1) 1) ong Living Re (C4) Tilled Soils (C	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N	r Indicators (2 or Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3) leutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) Die (C2) Aerial Imagery (CD2)
Pepth (inch Remarks: YDROLOG Wetland Hydica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	rology Indicators: stors (minimum of all later (A1) er Table (A2) n (A3) nks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	one required;	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves (B9, 2, 4A, and 4B B11) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in T Stressed Plants	3) 1) 1) 2) 2) 2) 3) 3) 4) 4) 5) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r Indicators (2 or Stained Leaves, and 4B) age Patterns (B1 eason Water Tatation Visible on A orphic Position (w Aquitard (D3) deutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) ole (C2) verial Imagery (CD2) 6) (LRR A)
Depth (inch Remarks: IYDROLOG Wetland Hydica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	rology Indicators: stors (minimum of all vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial	ne required;	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9, 2, 4A, and 4E 311) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in 1	3) 1) 1) 2) 2) 2) 3) 3) 4) 4) 5) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r Indicators (2 or Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3) leutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) ole (C2) verial Imagery (CD2) 6) (LRR A)
Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely \	rology Indicators: stors (minimum of a /ater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial /egetated Concav	ne required;	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9, 2, 4A, and 4B B11) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in T Stressed Plants	3) 1) 1) 2) 2) 2) 3) 3) 4) 4) 5) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6) 6)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r Indicators (2 or Stained Leaves, and 4B) age Patterns (B1 eason Water Tatation Visible on A orphic Position (w Aquitard (D3) deutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) ole (C2) verial Imagery (CD2) 6) (LRR A)
Depth (inch Remarks: IYDROLOG Wetland Hyde Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely V Field Observe	rology Indicators: tors (minimum of of vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial vegetated Concaviations:	one required; Imagery (B7) e Surface (B8	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9 , 2, 4A, and 4B 311) ertebrates (B13 ulfide Odor (C aizospheres ald Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	B) II) Ing Living Re (C4) IIIled Soils (C6) IIIled Soils (C7) IIIled Soils (C7)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r Indicators (2 or Stained Leaves, and 4B) age Patterns (B1 eason Water Tatation Visible on A orphic Position (w Aquitard (D3) deutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) ole (C2) verial Imagery (CD2) 6) (LRR A)
Depth (inch Remarks: IYDROLOG Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely \ Field Observa Surface Water	rology Indicators: tors (minimum of all all all all all all all all all al	imagery (B7) e Surface (B8	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves (B9 , 2, 4A, and 4B B11) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	3) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raiseo	r Indicators (2 or Stained Leaves, and 4B) age Patterns (B1 eason Water Tatation Visible on A orphic Position (w Aquitard (D3) deutral Test (D5)	more required) (B9) (MLRA 1, 1) 0) ole (C2) verial Imagery (CD2) 6) (LRR A)
Depth (inch Remarks: IYDROLOG Wetland Hydir Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Water Water Water Water Water Water Water Water Surface Water Water Table P	rology Indicators: stors (minimum of all later (A1) er Table (A2) er (A3) er (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) er Visible on Aerial legetated Concaviations: Present? Y	Imagery (B7) e Surface (B8) es No	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	ed Leaves (B9, 2, 4A, and 4B311) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	i) i) ii) ing Living Ro (C4) filled Soils (C is (D1) (LRR)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raisec	r Indicators (2 or -Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3) leutral Test (D5) d Ant Mounds (D Heave Hummock	more required) (B9) (MLRA 1, 1) (B9) (MLRA 1, 1) (B9) (C2) (B1) (C2) (B2) (C3) (B2) (C4) (B3) (C5) (B4) (C5) (B5) (C7)
Depth (inch Remarks: IYDROLOG Wetland Hydic Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Water Water Table P Saturation Pre	rology Indicators: stors (minimum of all alter (A1) er Table (A2) er (A3) er (A3) er (B4) er (B3) er (B4) sits (B3) er (B4) sits (B5) er (B5) er (B6)	imagery (B7) e Surface (B8	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	ed Leaves (B9 , 2, 4A, and 4B B11) ertebrates (B13 ulfide Odor (C nizospheres ald Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	i) i) ii) ing Living Ro (C4) filled Soils (C is (D1) (LRR)	oots (C3)	Secondary Water 4A, Draina Dry-Se Satura Geom Shallo FAC-N Raisec	r Indicators (2 or Stained Leaves, and 4B) age Patterns (B1 eason Water Tatation Visible on A orphic Position (w Aquitard (D3) deutral Test (D5)	more required) (B9) (MLRA 1, 1) (B9) (MLRA 1, 1) (B9) (C2) (B1) (C2) (B2) (C3) (B2) (C4) (B3) (C5) (B4) (C5) (B5) (C7)
Pepth (inche Remarks: YDROLOG Wetland Hydin Primary Indication Surface William Water Mater Table Posturation Preincludes capill	rology Indicators: tors (minimum of olater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial /egetated Concavitions: Present? yresent? yresent? yresent?	Imagery (B7) e Surface (B8) es No es No es No	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	ed Leaves (B9, 2, 4A, and 4B11) ertebrates (B13 ulfide Odor (C nizospheres ald F Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	3) 3) 1) 11) 11) 12) 13) 14) 15) 16) 16) 17) 17) 18) 18) 19) 19) 19) 19) 19) 19) 19) 19) 19) 19	oots (C3)	Secondary Water 4A Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-I	r Indicators (2 or -Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3) leutral Test (D5) d Ant Mounds (D Heave Hummock	more required) (B9) (MLRA 1, 1) (B9) (MLRA 1, 1) (B9) (C2) (B1) (C2) (B2) (C3) (B2) (C4) (B3) (C5) (B4) (C5) (B5) (C7)
Depth (inch Remarks: YDROLOG Wetland Hyde Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Water Water Table P Saturation Pre includes capil	rology Indicators: tors (minimum of olater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) n Visible on Aerial /egetated Concavitions: Present? yresent? yresent? yresent?	Imagery (B7) e Surface (B8) es No es No es No	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain) Depth (inch	ed Leaves (B9, 2, 4A, and 4B11) ertebrates (B13 ulfide Odor (C nizospheres ald F Reduced Iron Reduction in 1 Stressed Plants ain in Remarks	3) 3) 1) 11) 11) 12) 13) 14) 15) 16) 16) 17) 17) 18) 18) 19) 19) 19) 19) 19) 19) 19) 19) 19) 19	oots (C3)	Secondary Water 4A Draina Dry-Se Satura Geom Shallo FAC-N Raisec Frost-I	r Indicators (2 or -Stained Leaves , and 4B) age Patterns (B1 eason Water Tat tion Visible on A orphic Position (w Aquitard (D3) leutral Test (D5) d Ant Mounds (D Heave Hummock	more required) (B9) (MLRA 1, 1) (B9) (MLRA 1, 1) (B9) (C2) (B1) (C2) (B2) (C3) (B2) (C4) (B3) (C5) (B4) (C5) (B5) (C7)

Projecusite: South Hiller Road			legville/thumboldtsampling Date: 1/25/202
Applicant/Owner: Life Plan Humbold+			State: CA Sampling Point: UP 4
Investigator(s): Miles Hartnet, Jane	Cipra Section	on, Township, Rar	nge TOON ROTE S3/ TON RIE
			convex, none): 5/22 Slope (%): 5%
Subregion (LRR): WMVC - LRQA			
	/		
Soil Map Unit Name: Halfbluff-Tepona-Urba	n/Avat	* + Candyn	nountainNWI classification: None
Are climatic / hydrologic conditions on the site typical for th	is time of year? Y	es No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	170	A STATE OF THE PARTY OF THE PAR	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problem	atic? (If ne	eded, explain any answers in Remarks.)
		npling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes I	No ov		
Hydric Soil Present? —Yes——I	No	Is the Sampled	\ /
Wetland Hydrology Present? ——Yes	No	within a Wetlan	nd? Yes No
Venedation sampled for 1-p soll pit did not find hy	ar wella	ud. Did	not quality. Nearby
		83 8011 W	ras not tested here.
VEGETATION – Use scientific names of plan	nts.		
		ninant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.			Total Number of Dominant
3			Species Across All Strata: (B)
4	= To	otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size: 5 M)		ACCOMPANIES AND RESERVED AND ACCOUNTS	
1. Salix Wookerianh	30 W	es FACW	Prevalence Index worksheet:
2.	0		Total % Cover of: Multiply by:
			OBL species x 1 =
3.			FACW species
4			FAC species 3 x3 = 9
5.			FACU species 40 x4= 160
Herb Stratum (Plot size: M)	= To	otal Cover	UPL species x 5 =
1. Festuca avundinacea	20/1	FAC	Column Totals: 73 (A) 229 (B)
2. Ranunculus repens	10/6	FAC	Prevalence Index = B/A = 3.13
3			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
6			
			3 - Prevalence Index is ≤3.01
7			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8			
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11.			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	3= To	tal Cover	be present, unless disturbed of problematic
Woody Vine Stratum (Plot size:)	16001		
1. Rubis ursinus	- 40 10 las	es FACI)	Hydrophytic
2			Vegetation Present? Yes No
% Bare Ground in Herb Stratum 97	<u> </u>		
Remarks:	. 1 1	1	litter. Very little herbaceous
Bare ground is covered	in leat	of grass	TITTEV. VEVE ITTE NEVOLCEOUS
VOK.		U	

Applicant/Owner: Life Plan Humbold + Investigator(s): Miles Hartnet, Jane Cpro Landform (hillslope, terrace, etc.) Wind Horre Cl Subregion (LRR): WMVC-CRD-A Lat Soil Map Unit Name: Halfbluff-Tepona-Urban / Are climatic / hydrologic conditions on the site typical for this time Are Vegetation, Soil, or Hydrology signific Are Vegetation, Soil, or Hydrology natural SUMMARY OF FINDINGS - Attach site map show	Local 40.94 Arcal of year? antly distuly problem	al relief (co	NoAre "No	State: CA Sampling Point: UP5 ge: TOWN ROTE FRI TAN AND RE provex, none): ditch Slope (%): D-5/6 Long: D4 106203 Datum: MAD83 Loud fair NWI classification: None (If no, explain in Remarks.) formal Circumstances" present? Yes No deded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes No/		1	-	
Hydric Soil Present?		Is the S	ampled /	Area
Wetland Hydrology Present? Yes No		within a	Wetland	Yes No V
Remarks: . \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
Ditch at culvert. Does not a	ppear	hydro	logice	illy connected to the wetland.
VEGETATION - Use scientific names of plants.				
		minant Inc		Dominance Test worksheet:
	over Sp	ecies? S	TAL	Number of Dominant Species
2 Abies grandis	10/0	E E	ACU	That Are OBL, FACW, or FAC
3 U			700	Total Number of Dominant Species Across All Strata: (B)
4.	-			
F- 1	12 = 7	otal Cover		Percent of Dominant Species That Are OBL, FACW, or FAC
Sapling/Shrub Stratum (Plot size: 0 M			101	Prevalence Index worksheet:
1. Cutisus supparius	0/0 _		JP C	Total % Cover of: Multiply by:
2. Polystichun munitum 1º	1p		ACU.	OBL species x 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5	77	otal Cover		FACU species x 4 =
Herb Stratum (Plot size:/M)		otal Cover		UPL species x 5 =
1				Column Totals: (A) (B)
2.				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4			i	1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0¹
7				 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants
9				Problematic Hydrophytic Vegetation¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must
	D =T	otal Cover		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5 M)	,	0101 00101	. [
1. Rubus cersinos 7		hes F	AU	Hydrophytic
2. Ruling armeniacus 1	00	E	AL	Vegetation Present? Yes No
% Bare Ground in Herb Stratum /DD	<u>φ</u> =Τ	otal Cover		100
Remarks:				
No herbaceous veg in ditch				
100				

Project/Site: South Hiller Road	Ci		eyville/Humboldtsampling Date 1/25/2023
Applicant/Owner: Life Plan Humbold+			State: CA Sampling Point: UP 6
Investigator(s): Miles Hartnet, Jane (IDYA S	ection, Township, Ran	ige T-06N-ROTESS/ITTNIRE
Landform (hillslope, terrace, etc.): Marile lecter			
Subregion (LRR): WMVC-LRRA			
Soil Map Unit Name: Halfbluff-Tepona-Urban			
Are climatic / hydrologic conditions on the site typical for this	time of year	? Yes _ V No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology s	ignificantly di	sturbed? Are "I	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally probl	lematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing s	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	0		
Hydric Soil Present? —YesN	0	Is the Sampled	/
Wetland Hydrology Present? YesN	0	within a Wetlan	d? Yes No \/
Remarks: Upland veg. in shallow di	Tch,	h	
VEGETATION – Use scientific names of plan	to		
		Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 0 M		Species? Status	
1. Alnus rubra		FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata
4		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)
Sapling/Shrub Stratum (Plot size: 5 m	0/		Prevalence index worksheet:
1. Vaccinium ovatum	10%		
2. Gaulteria shallon	20%	125 FACU	Total % Cover of: Multiply by:
3		0	OBL species x 1 =
4			FACW species x 2 =
5			FAC species x 3 =
	30	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: M	2.00		UPL species x 5 =
1. Festica avindinacea	20%	ines FAC	Column Totals: (A) (B)
2. Daucus carota	1%	FACU	Prevalence Index = B/A =
3. Agrostis stolonifura	30	Wes FAC	Hydrophytic Vegetation Indicators:
4. 0			1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50%
6			
and the second s			3 - Prevalence Index is ≤3.0¹
8.			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Welland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
F	51 =	Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 5 m	r01	C	
1. Rubus ursinus	5%	Ines FACU	Hydrophytic
2. Rubus armeniacus	10/6	FAL	Vegetation Present? Yes No
% Bare Ground in Herb Stratum	_6=	Total Cover	
Remarks			
			et e

Investigator(s): Miles Havtnet, Jave Cipra Section, Township, Richard Local relief (concave, Subregion (LRR): WMVC - 1 RQ - A Lat. 40.942027 Soil Map Unit Name: Halfbluff - Tepona - Urban Avata + Canda Are climatic / hydrologic conditions on the site typical for this time of year? Yes No_ Are Vegetation, Soil, or Hydrology significantly disturbed? Are	State: CA Sampling Point: UP 7 ange: Total Roll-Sel Total Roll- convex. none): At A Slope (%): 50% Long: 124, 104744 Datum: NADES MOUNTAINNWI classification: None (If no, explain in Remarks.) "Normal Circumstances" present? Yes No eeded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Sit Present? Wetland Market South Fresent?	/
vveiland Hydrology Present?	165
Remarks: Eastern and of shallow roadside ditch, Co	noirmed not 1-par. AVEG Sign
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size: 10 m) Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet:
1. PSeudostran menziesii 15 me FALV	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Alus vibra 5 FAC	That Are OBL, FACW, or FAC: (A)
3. Encalmotos dobulos 20 mes UPL	Total Number of Dominant Species Across All Strata (B)
4.	
40 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: SW) 1 Salix Maplewilling 5% FACW	Prevalence Index worksheet:
	Total % Cover of: Multiply by:
	OBL species x 1 =
4. Ilex agnifolium 2% FACU	FACW species x 2 =
5. Polystichum munitum 2% FACU	FAC species x 3 =
(c) = Total Cover	FACU species x 4 =
Herb Stratum (Plot size: W)	UPL species x 5 =
1. Dactulis glomerata 20 crs FACI	Column Totals: (A) (B)
2. Dancis chroto 10 PACO	Prevalence Index = B/A =
	1,7,1,0,1,0,1,0,1,0,1,0,1,0,1,0,1,0,1,0,
4	1 - Rapid Test for Hydrophytic Vegetation
5	2 - Dominance Test is >50%
6	3 - Prevalence Index is ≤3.0¹
8.	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.	5 - Wetland Non-Vascular Plants¹
10	Problematic Hydrophytic Vegetation¹ (Explain)
11	Indicators of hydric soil and wetland hydrology must
= Total Cover	be present, unless disturbed or problematic
1. Pubus ursinus 10% has FAW	
1. PANOUS OFSINOS 10 6 HES TACO	Hydrophytic Vegetation
	Present? Yes No \
% Bare Ground in Herb Stratum	
Remarks:	
	*

Applicant/Owner: Life Plan Humboldt Investigator(s): Miles Hartnet, Jane (Landform (hillslope, terrace, etc.): Morris Lesses Subregion (LRR): WMVC/RP. A Soil Map Unit Name: Halfbluff-Tepona-Urban	Lat: 40,9	ion, Township, Rai al relief (concave, 1987) a + Caudy	Convex, none): Slope (%): 0-5 Long: 124.105769 Datum: NADGS NountainNWI classification: None
Are climatic / hydrologic conditions on the site typical for this			
Are Vegetation, Soil, or Hydrology s			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n	aturally problen	natic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map		mpling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N. Hydric Soil Present? Yes N. Wetland Hydrology Present? Yes N. Remarks: Within Encalyptus grove.	0	Is the Sampled within a Wetlan	nd? Yes No V
with Endighter grove.	00.1	1 Thomas	
VEGETATION - Use scientific names of plan	ts.		
1. Fucal up ful globulus	% Cover Sp	minant Indicator ecies? Status UPL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3.			Total Number of Dominant Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= T	otal Cover	That Are OBL, FACW, or FAC: SO (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of:Multiply by.
3.			OBL species x 1 =
4.			FACW species x 2 = FAC species x 3 =
5			FACU species x 3 = x 4 =
1	= 7	otal Cover	UPL species x 5 =
Herb Stratum (Plot size: M)	5	FAC	Column Totals: (A) (B)
2. Festina arundinacea	30 U		
3. Lunius arboreus	5 7	13 -17.0	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4 Stackers chamilanis	7		1 - Rapid Test for Hydrophylic Vegetation
4. Stackys chamissonis 5. Geranium molle	7 7 0		2 - Dominance Test is >50%
6 Soncus acpe-			3 - Prevalence Index is ≤3.01
7.			4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation (Explain)
11			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size)	<u>43</u> =T	otał Cover	be present, unless distarbed of problematic.
1			The state of the s
2			Hydrophytic Vegetation
	= T	otal Cover	Present? Yes No
% Bare Ground in Herb Stratum5_7			
Remarks: Little and dirt visible in	100	malinal	
Litter and dirt visible in	00	Oronon	

atte atte		
$c \sim$	11	
- 11 1		

5-17

Sampling Point: UPS

DepthMatrix		Redox	r Features					
(inches) Color (moist)	%Cc	olor (moist)	%	Type	_Loc²	Texture		Remarks
0-16 10-13/3	100			di di				**************************************
10-17 16,53/7	1				(C	-		
	100							
END								
				-				
		_ ,				11	×	
							22	
								-
					_		-	
Type: C=Concentration, D=Deple	etion, RM=Redu	ced Matrix, CS	=Covered	or Coate	d Sand Gr	~ ~		re Lining, M=Matrix.
lydric Soil Indicators: (Applica	ble to all LRRs	, unless other	wise note	d.)		Indicate	ors for Probler	matic Hydric Soils ³ :
Histosol (A1)	s	andy Redox (S	5)			2 cı	n Muck (A10)	
Histic Epipedon (A2)	s	tripped Matrix ((S6)			Rec	Parent Materi	al (TF2)
Black Histic (A3)	L	oamy Mucky M	lineral (F1)) (except	MLRA 1)			Surface (TF12)
Hydrogen Sulfide (A4)		oamy Gleyed N					er (Explain in R	
Depleted Below Dark Surface		epleted Matrix						unic - (2.50 f 2.50 f 3.50 €)
Thick Dark Surface (A12)		edox Dark Sur				3Indicate	ors of hydrophy	tic vegetation and
Sandy Mucky Mineral (S1)		epleted Dark S		7)				nust be present.
Sandy Gleyed Matrix (S4)	R	edox Depressi	ons (F8)				s disturbed or	
Restrictive Layer (if present):				1976				<u> </u>
Type:								
Depth (inches):						11. 4.1. 6.11	5 .6 .9	
Remarks:						Hydric Soil	Present? T	es No
V2221		_				***		
2					V4			
Vetland Hydrology Indicators:		al all that and in						
Vetland Hydrology Indicators:						Seco	ndary Indicators	s (2 or more required)
YDROLOGY Vetland Hydrology Indicators: 'rimary Indicators (minimum of on Surface Water (A1)		Water-Stair	ned Leaves	30	xcept	5950	ra sara ta War	C17 2
Vetland Hydrology Indicators: rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2)		Water-Stair		30	xcept	5950	ra sara ta War	C17 2
Vetland Hydrology Indicators: rimary Indicators (minimum of on Surface Water (A1)		Water-Stair	ned Leave: , 2, 4A, an	30	xcept	_ v	/ater-Stained L	eaves (B9) (MLRA 1, 2
Vetland Hydrology Indicators: rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stair MLRA 1	ned Leaves , 2, 4A, an B11)	nd 4B)	xcept	_ v	/ater-Stained L 4A, and 4B)	eaves (B9) (MLRA 1, 2
Vetland Hydrology Indicators: rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3)	-	Water-Stair MLRA 1 Salt Crust (ned Leaves , 2, 4A, an B11) ertebrates	(B13)		_ v	Jater-Stained L 4A, and 4B) rainage Patterr ry-Season Wat	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2)
Vetland Hydrology Indicators: rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	-	Water-Stair MLRA 1 Salt Crust (Aquatic Inve	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd	(B13) or (C1)		v	/ater-Stained L 4A, and 4B) rainage Patter ry-Season Wal aturation Visibl	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C
Vetland Hydrology Indicators: 'rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	-	Water-Stair MLRA 1 Salt Crust (I Aquatic Invi Hydrogen S Oxidized RI	ned Leaves , 2, 4A, and B11) ertebrates Sulfide Odd nizosphere	(B13) or (C1) es along t	Living Roo	V C S ts (C3) G	/ater-Stained L 4A, and 4B) rainage Pattern ry-Season Wataluration Visible	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (Cs sition (D2)
Vetland Hydrology Indicators: Irimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	-	Water-Stair MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rt Presence o	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced	(B13) or (C1) es along l	Living Roo	V C S ts (C3) S	/ater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (Cs sition (D2) if (D3)
Vetland Hydrology Indicators: Irimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	-	Water-Stair MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odo nizosphere f Reduced Reduction	(B13) or (C1) es along l I Iron (C4	Living Roo) 1 Soils (C6	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes	ns (B10) ter Table (C2) te on Aerial Imagery (C4) ti (D3) st (D5)
Vetland Hydrology Indicators: Irimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	- - - - -	Water-Stair MLRA 1 Salt Crust (i Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P	(B13) or (C1) es along l I Iron (C4 n in Tilled	Living Roo) 1 Soils (C6	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (Csition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: Irimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im		Water-Stair MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized RI Presence o Recent Iron	ned Leaves 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P	(B13) or (C1) es along l I Iron (C4 n in Tilled	Living Roo) 1 Soils (C6	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (Csition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: 'rimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave		Water-Stair MLRA 1 Salt Crust (i Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S	ned Leaves 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P	(B13) or (C1) es along l I Iron (C4 n in Tilled	Living Roo) 1 Soils (C6	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: Vrimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave ield Observations:	nagery (B7)	Water-Stair MLRA 1 Salt Crust (i Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves , 2, 4A, an B11) ertebrates Gulfide Odd nizosphere f Reduced Reduction Stressed P ain in Rem	(B13) or (C1) es along to liron (C4) n in Tillec Plants (D4) narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave	nagery (B7) Surface (B8)	Water-Stair MLRA 1 Salt Crust (I Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd nizosphere f Reduced Reduction Stressed P ain in Rem	(B13) or (C1) es along to tron (C4) in in Titlec Plants (D'	Living Roo I) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave ield Observations: surface Water Present? Veter Table Present?	nagery (B7)	Water-Stair MLRA 1 Salt Crust (i Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes):	(B13) or (C1) es along to liron (C4) in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave ield Observations: surface Water Present? Veter Table Present? Veter Table Present?	nagery (B7)	Water-Stair MLRA 1 Salt Crust (i Aquatic Invo Hydrogen S Oxidized Ri Presence o Recent Iron Stunted or S Other (Expl	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes):	(B13) or (C1) es along to liron (C4) in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitard AC-Neutral Tes aised Ant Mour	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave includes Capillary Fringe)	nagery (B7)	Water-Stair MLRA 1 Salt Crust (Aquatic Inverse of the content of	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes): hes):	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitaro AC-Neutral Tes aised Ant Mou	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) te on Aerial Imagery (Csition (D2) of (D3) of (D5) nds (D6) (LRR A) mmocks (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave ield Observations: surface Water Present? Veter Table Present? Veter Table Present?	nagery (B7)	Water-Stair MLRA 1 Salt Crust (Aquatic Inverse of the content of	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes): hes):	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitard AC-Neutral Tes aised Ant Mour	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) te on Aerial Imagery (Csition (D2) of (D3) of (D5) nds (D6) (LRR A) mmocks (D7)
Vetland Hydrology Indicators: Vrimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave (ield Observations: urface Water Present? Yester Table Present? Yester Table Present? Yester Cludes capillary fringe) vescribe Recorded Data (stream general)	nagery (B7)	Water-Stair MLRA 1 Salt Crust (Aquatic Inverse of the content of	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes): hes):	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitard AC-Neutral Tes aised Ant Mour	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) te on Aerial Imagery (Cisition (D2) of (D3) of (D5) nds (D6) (LRR A) mmocks (D7)
Vetland Hydrology Indicators: Primary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave includes Capillary Fringe)	nagery (B7)	Water-Stair MLRA 1 Salt Crust (Aquatic Inverse of the content of	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes): hes):	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitard AC-Neutral Tes aised Ant Mour	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) e on Aerial Imagery (C9 sition (D2) of (D3) st (D5) nds (D6) (LRR A) mmocks (D7)
Vetland Hydrology Indicators: Vrimary Indicators (minimum of on Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Im Sparsely Vegetated Concave (ield Observations: urface Water Present? Yester Table Present? Yester Table Present? Yester Cludes capillary fringe) vescribe Recorded Data (stream general)	nagery (B7) Surface (B8) s No s No gauge, monitorin	Water-Stair MLRA 1 Salt Crust (Aquatic Inverse of the content of	ned Leaves , 2, 4A, an B11) ertebrates Sulfide Odd hizosphere f Reduced Reduction Stressed P ain in Rem hes): hes):	(B13) or (C1) es along li Iron (C4 n in Tillec Plants (D' narks)	Living Roo) 1 Soils (C6 1) (LRR A)	V C S ts (C3) S S F	Jater-Stained L 4A, and 4B) rainage Pattern ry-Season Wal aturation Visibl eomorphic Pos hallow Aquitard AC-Neutral Tes aised Ant Mour	eaves (B9) (MLRA 1, 2 ns (B10) ter Table (C2) te on Aerial Imagery (C sition (D2) of (D3) st (D5) nds (D6) (LRR A) mmocks (D7)

Samuel Carll Haller Paul		MeV: al	and 110/th wholdton in 1/25/2022
Applicant/Owner: Life Plan Humbold+			enville/Humbold tsampling Date. 1/25/2023 State: CA Sampling Point: UP9
Investigator(s) Miles Hartnet, Jane Ci			
Landform (hillslope, terrace, etc.): Wiffil Herrace			
Subregion (LRR): WMVC			
Soil Map Unit Name: Halfbluff-Tepona- Urban	/	/ 0	
Are climatic / hydrologic conditions on the site typical for this tit	me of yea		
Are Vegetation, Soil, or Hydrology sign	nificantly d	listurbed? Are "I	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natu	urally prob	olematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sh	owing	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _			
Hydric Soil Present? Yes No _		Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No _			
Open field at east end a	9 P	roperty. Die	d not pass prevalence index.
VEGETATION - Use scientific names of plants			
	Absolute	Dominant Indicator	Dominance Test worksheet:
		Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2,			Total Number of Dominant
3			Species Across All Strata (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size)		= Total Cover	That Are OBL, FACW, or FAC: 100 / 2 (A/B)
1			Prevalence Index worksheet:
2.			Total % Cover of:Multiply by:
3		1	OBL species x 1 =
4			FACW species x2=
5			FAC species 60 x3 = 185 FACU species 16 x4 = 64
		= Total Cover	UPL species x 5 =
1. Festra granding coa	60	LO TAC	Column Totals: 76 (A) 244 (B)
	10	YES FACU	
3. Ladama Communis	2	FACU	Prevalence Index = B/A = 3, 2
4. Plantago lanceolata	Ī	FACU	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
5. Tarayayun officinale	1	FACU	2 - Dominance Test is >50%
6. Huppichaevis radicata	2		_ 3 - Prevalence Index is ≤3.0 FAII
7. 01			4 - Morphological Adaptations' (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	76	= Total Cover	be present, unless disturbed of problematic.
Woody Vine Stratum (Plot size:)			
1			Hydrophytic Vegetation
		= Total Cover	Present? Yes No V
% Bare Ground in Herb Stratum 24			
Remarks:	-Th	u Samle pont	contains donimunt FAC masks 90
Bare ground + litter visite	e an	of other FACH on	ep. No indicators for hydrolyy a 1501)
T. Control of the Con	10	TO DEFENDE THE	AND THE TOTAL PROPERTY OF THE PARTY OF THE P

Depth Matrix	oth needed to document the indicator or confirm	5 DECOUNTS - ONES UNESSE DE CONSESSE CONTRACTOR DE CENTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE C
(inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks
12-6 Tay/3/2 100		Trans.
		Toan
6-18 2,5212 100		
18-24 1000311 80	75 vr6/8 20 (M	Spirity Proin
GIVD -		
<u> </u>		
	=Reduced Matrix, CS=Covered or Coated Sand Gr	
Hydric Soil Indicators: (Applicable to all	ANGARIST TOTAL TOTAL TOTAL AND ANGEN AND ANGE	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	The state of the s
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if present):	Redox Depressions (F8)	unless disturbed of problematic.
	*	
Type:		V
Depth (inches):		Hydric Soil Present? Yes No
IYDROLOGY		
Wetland Hydrology Indicators:		
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Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C
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Appendix C Site Photographs

Photo 1:

Description:

Representative photo of Wetland 1, a three-parameter wetland comprising 23,940 sqft.

Photo taken at sample point W1T2-w.

Location:

40.941740,-124.105874

Date:

January 25, 2023



Photo 2:

Description:

Representative photo of Wetland 2, a oneparameter wetland comprising 724 sqft.

Photo taken at sample point W2-w.

Location:

40.941973,-124.105786

Date:

January 25, 2023



Photo 3:

Description:

Representative photo of Wetland 3, a oneparameter wetland comprising 171 sqft.

Photo taken at sample point W3T1-w.

Location:

40.941401,-124.103607

Date:

January 31, 2023



Photo 4:

Description:

Representative photo of upland areas comprising of pastureland.

Photo taken at sample point Up2.

Location:

40.940900,-124.104919

Date:

January 25, 2023



Photo 5:

Description:

Representative photo of upland areas comprising mowed pastureland on the eastern section of the PSB.

Photo taken at sample point Up9.

Location:

40.941171,-124.103606

Date:

January 25, 2023



Photo 6:

Description:

Representative photo of upland areas within the eucalyptus grove.

Photo taken at sample point Up8.

Location:

40.941817,-124.103764

Date:

January 25, 2023



Photo 7:

Description:

Representative photo of the upland ditch along the south side of Hiller Rd.

Photo taken at sample point Up7.

Location:

40.942027,-124.104744

Date:

January 31, 2023



Photo 8:

Description:

Inlet of the 36-inch concrete culvert under Hiller Rd. The black PVC pipe drains water from the adjacent property directly west of the PSB.

Photo taken at sample point Up5.

Location:

40.942060,-124.106203

Date:

January 31, 2023



Appendix D NRCS Custom Soil Resources Report



NRCS

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Humboldt County, Central Part, California

12603187 LPH Wetland Delineation



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

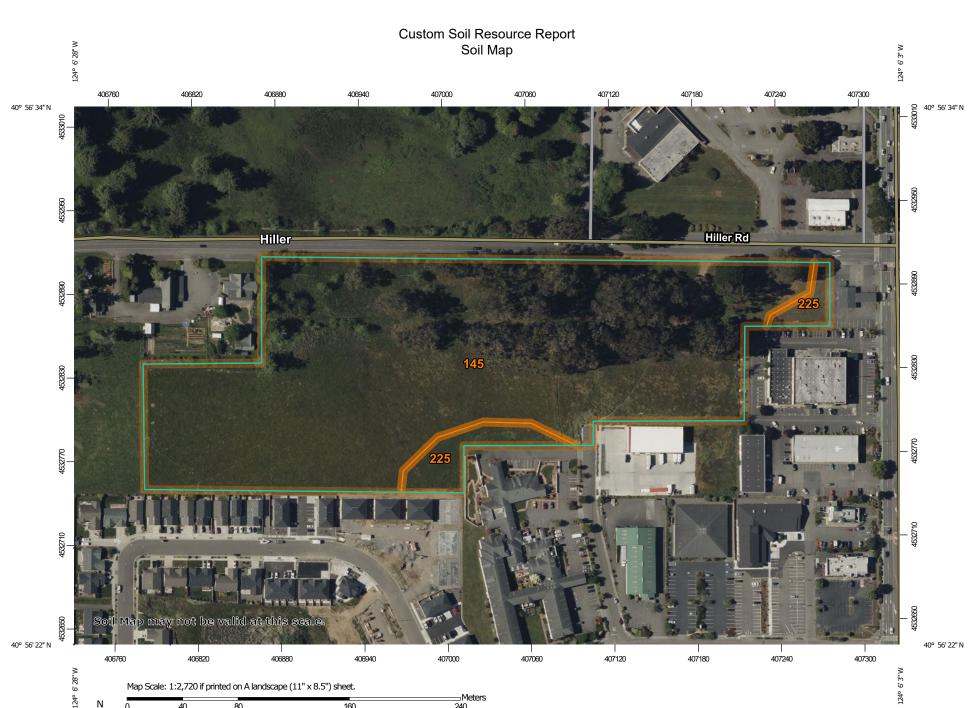
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

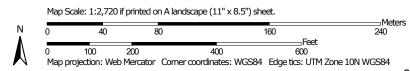
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.





MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

(o)

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Sodic Spot

Slide or Slip

Spoil Area

Stony Spot



Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes



Major Roads



Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California Survey Area Data: Version 9, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
145	Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes	14.0	94.0%
225 Arcata and Candymountain soils, 0 to 2 percent slopes		0.9	6.0%
Totals for Area of Interest		14.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Humboldt County, Central Part, California

145—Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 23d0g

Elevation: 10 to 120 feet

Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 275 to 325 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Halfbluff and similar soils: 35 percent Tepona and similar soils: 30 percent Urban land, residential: 25 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Halfbluff

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 11 inches: fine sandy loam BA - 11 to 18 inches: fine sandy loam Bw - 18 to 35 inches: sandy loam CB - 35 to 43 inches: sandy loam 2C1 - 43 to 55 inches: loamy sand 2C2 - 55 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: About 30 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: C

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern,

marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Description of Tepona

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A1 - 2 to 12 inches: loam

A2 - 12 to 25 inches: very fine sandy loam

Bw1 - 25 to 35 inches: sandy loam Bw2 - 35 to 41 inches: sandy loam C1 - 41 to 49 inches: sandy loam C2 - 49 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: About 30 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: C

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern,

marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Description of Urban Land, Residential

Settina

Landform: Alluvial fans

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Talawa

Percent of map unit: 5 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

Tillas

Percent of map unit: 3 percent

Landform: Alluvial fans

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Convex Hydric soil rating: No

Hookton

Percent of map unit: 2 percent Landform: Erosion remnants

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

225—Arcata and Candymountain soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2lmt0

Elevation: 10 to 290 feet

Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 275 to 325 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Arcata and similar soils: 50 percent

Candymountain and similar soils: 35 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from mixed

Typical profile

A - 0 to 23 inches: fine sandy loam
AB - 23 to 37 inches: very fine sandy loam
Bw - 37 to 51 inches: fine sandy loam
C - 51 to 67 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from mixed

Typical profile

A1 - 0 to 11 inches: fine sandy loam
A2 - 11 to 19 inches: fine sandy loam
Bt1 - 19 to 38 inches: fine sandy loam
Bt2 - 38 to 48 inches: fine sandy loam
BCt - 48 to 55 inches: sandy loam
C - 55 to 63 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-

salmonberry/western swordfern-deer fern, marine terraces, loam

Hydric soil rating: No

Timmons

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Halfbluff

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Talawa

Percent of map unit: 2 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

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Appendix E

NRCS National Water and Climate Center WETS Table

WETS Station: ARCATA EUREKA AP, CA													
Requested years: 2003 - 2023													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	55.9	40.0	47.9	6.80	4.36	8.18	11	-					
Feb	55.2	39.1	47.2	5.80	2.98	7.08	10	-					
Mar	55.8	40.7	48.2	6.59	4.55	7.85	12	-					
Apr	56.8	42.1	49.4	4.23	2.57	5.12	9	-					
May	58.9	45.7	52.3	1.89	0.83	2.31	5	-					
Jun	62.3	48.5	55.4	1.07	0.35	1.22	2	-					
Jul	63.0	51.2	57.1	0.20	0.06	0.21	0	-					
Aug	63.9	51.4	57.6	0.20	0.05	0.21	0	-					
Sep	64.7	48.3	56.5	-	-	-	-	-					
Oct	62.7	45.3	54.0	3.14	1.12	3.79	5	-					
Nov	58.1	41.6	49.9	5.32	3.81	6.29	10	-					
Dec	54.9	39.2	47.0	8.56	5.53	10.30	13	-					
Annual:					-	-							
Average	59.4	44.4	51.9	-	-	-	-	-					
Total	-	-	-	-			-	-					
GROWING SEASON DATES													
Years with missing data:	24 deg = 1	28 deg = 2	32 deg = 1										
Years with no occurrence:	24 deg = 19	28 deg = 5	32 deg = 0										
Data years used:	24 deg = 20	28 deg = 19	32 deg = 20										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	No occurrence	Insufficient data	3/26 to 11/24: 243 days										
70 percent *	No occurrence	Insufficient data	3/17 to 12/3: 261 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.													
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1945					M4.07	MT	0.01	M0.00	M0. 37	4. 60	13. 01	12. 89	34. 95
1946	5.01	6.44	5.31	M0.50									17. 26
1947													
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1998		14.12	8.13	2.33	4.51	0.24	0.06	0.02	0. 28	4. 65	16. 57		50. 91
1999	5.80	12.28	9.94	2.42	2.31	0.06	0.01	0.25	0.	1.	8.	3.	46.
									01	53	32	66	59
2000	12.80	8.67	3.09	3.78	2.77	1.08	0.02	0.02	0.	3.	4.	2.	43.
0001	2.00	4.50	0.01	2.07	0.00	1.00	0.17	0.00	44	37	26	76	06
2001	3.92	4.53	2.21	3.07	0.99	1.00	0.17	0.23	0. 41	1. 78	9. 54	11. 41	39. 26
2002	7.56	6.95	4.75	3.06	0.70	0.83	0.07	0.04	0.	0.	2.	22.	49.
									19	06	36	96	53
2003	7.81	3.78	5.63	12.92	1.45	0.11	0.04	0.58	0. 55	0. 56	6. 08	12. 97	52. 48
2004	6.71	9.07	2.59	2.07	1.14	0.07	0.11	0.70	0.	4.	1.	9.	48 38.
200 4	0.71	3.01	2.09	2.01	1.14	0.07	0.11	0.70	63	4. 98	71	9. 11	38. 89
2005	5.54	2.16	6.13	6.55	4.86	4.10	0.10	0.14	0.	3.	9.	13.	56.
									17	42	38	99	54
2006	11.94	5.97	10.63	4.50	1.48	0.56	0.08	0.10	0. 17	0. 70	9. 50	9. 68	55. 31
2007	2.63	13.11	3.66	3.71	0.95	0.67	0.86	0.12	1.		3.	7.	
_55.			00			2.0.	00		03	5. 73	23	78	43. 48

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2008	10.26	3.65	4.79	2.40	0.10	0.40	0.09	0.82	0. 18	1. 13	5. 08	10. 01	38. 91
2009	2.06	6.78	6.78	1.38	3.86	0.31	0.19	0.14	0. 63	2. 45	4. 34	5. 08	34. 00
2010	10.49	5.38	6.76	8.36	3.58	3.46	0.10	0.21	2. 00	5. 29	6. 35	12. 38	64. 36
2011	2.69	4.66	12.57	5.07	1.72	1.31	0.25	M0.05	M0. 37	5. 16	4. 64	3. 31	41. 80
2012	9.11	M2.12	12.65	5.66	1.08	2.41	0.76	0.08	0. 10	3. 55	6. 93	11. 06	55. 51
2013	2.94	2.00	3.47	2.24	1.88	0.78	0.00	0.10	4. 37	0. 05	1. 70	0. 98	20. 51
2014	2.16	7.90	8.85	1.84	1.05	0.73	Т	0.00	3. 23	5. 74	5. 11	9. 96	46. 57
2015	2.07	5.59	3.78	2.39	0.10	0.07	0.13	0.51	0. 59	1. 10	5. 30	18. 77	40. 40
2016	12.30	2.93	10.48	3.27	0.64	0.11	0.59	0.02	Т	12. 03	7. 20	8. 22	57. 79
2017	11.03	14.24	10.09	5.32	1.26	0.72	0.01	0.01	0. 73	1. 81	8. 55	2. 31	56. 08
2018	9.19	2.97	8.35	5.34	0.97	0.48	0.02	0.02	0. 32	0. 89	5. 68	5. 40	39. 63
2019	8.39	16.09	5.39	3.64	3.11	T	0.02	0.46	3. 21	2. 08	2. 05	7. 88	52. 32
2020	9.26	1.01	2.80	2.11	5.66	0.53	MT	0.02	0. 77	0. 60	3. 27	5. 14	31. 17
2021	6.81	6.15	4.29	0.67	0.33	1.93	0.11	0.01	1. 68	5. 40	3. 79	6. 73	37. 90
2022	2.92	0.41	2.18	5.08	2.64	2.73	0.60	Т	0. 52	0. 21	6. 47	10. 49	34. 25
2023	6.39	M0.00											6.39

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2023-02-03



→ The Power of Commitment



Wetland Habitat Mitigation & Monitoring Plan

Life Plan Humboldt

Life Plan Humboldt

3 April 2023



Prepared for:

Life Plan Humboldt 2475 North Bank Rd. McKinleyville, CA 95519

Project r	name	Life Plan Humboldt	Life Plan Humboldt							
Docume	nt title	Wetland Habitat Mi	tigation & Monito	ring Plan Life F	Plan Humboldt					
Project r	number	12603187	12603187							
Status	Revision	evision Author Reviewer Approved fo								
Code			Name	Signature	Name	Signature	Date			
[Status code]										
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GHD

718 3rd Street, Eureka, CA 95501

T 707.443.8326 | F 707.444.8330 | ghd.com

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1. Introduction

This document supports the Project's permitting and construction planning as deemed appropriate. This report is subject to, and must be read in conjunction with, the limitations set out in **Section 10**, **Scope and Limitations**, and the assumptions and qualifications contained throughout the report.

1.1 Site Location and Project Description

The Project includes the development of an aging in place life plan community consisting of multiple residential units and other amenities. The Project site located within Section 6, Township 06 North, Range 01 East, and Section 31, Township 07 North, Range 01 East, Arcata North USGS 7.5 Minute Quadrangle, Humboldt Base and Meridian, in Humboldt County, California. The site is comprised of one parcel approximately 14.7 acres and includes Assessor Parcel Numbers (APNs) 510-133-013 and 508-251-060 on Hiller Road, McKinleyville, California (**Appendix A, Figure 1**).

The Project site consists of the two APNs and contains an open pasture and eucalyptus grove bordered by the McKinleyville shopping center and undeveloped property to the north, commercial development to the east, residential development to the south, and a church and active pastureland to the west. The property is a generally flat to gently sloped with a wetland swale that dissects the site in a southeast to north westerly direction.

1.2 Purpose

This Wetland Habitat Mitigation and Monitoring Plan (WHMMP) has been prepared on behalf of Life Plan Humboldt aging in place life plan community project (hereafter "Project") for the U.S. Army Corps of Engineers (USACE) and North Coast Regional Water Quality Control Board (NCRWQCB, or "Regional Board") to satisfy water quality permit requirements. It is anticipated that the Project will impact regulated jurisdictional wetlands. The Project will thus require permits from the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), and a corresponding Water Quality Certification from the North Coast Regional Water Quality Control Board (NCRWQCB) under Section 401 of the CWA. As part of the Section 404 permitting process, the USACE will review the Project under NEPA and Section 106 of the National Historic Preservation Act.

Wetlands and other regulated waters impacted by the Project will require compensatory mitigation in coordination with the USACE and Regional Board, which will occur onsite, and the project is self-mitigating.

The purpose of the WHMMP is to provide detailed methods for creation and monitoring the success of wetlands and riparian habitat to compensate for impacts to USACE jurisdictional three-parameter wetlands resulting from Project implementation in compliance with the Project's Initial Study/Mitigated Negative Declaration (IS/MND) prepared under the California Environmental Quality Act (CEQA).

This WHMMP is patterned on Regulatory Program Regulation (33 CFR) guidance published by the USACE (2015), along with guidance from the Regional Board Clean Water Act Section 401 Water Quality Certification application (*Wetland Mitigation Checklist*) and the McKinleyville Community Plan. This WHMMP provides information on impacts to and creation of both three-parameter and one-parameter wetlands as required by the above mentioned respective agencies. This WHMMP provides mitigation and monitoring details for wetlands and riparian habitat as discussed in the accordance with anticipated Project permit requirements, including the following elements:

- 1. Baseline information on location and extent of existing wetlands.
- 2. Identification of wetland creation sites.
- 3. Proposed mitigation and implementation thereof.
- Ecological performance standards for wetland creation sites.
- 5. Monitoring protocols and reporting responsibilities.

- 6. Corrective actions if performance standards are not met.
- 7. Responsible parties for actions identified in this WHMMP.

2. Baseline Information

2.1 Studies within the Project Area

An Aquatic Resources Delineation (GHD 2023) was prepared to assess baseline environmental conditions within the Project Area and is included as **Appendix C**. This study evaluated the extent of existing aquatic resources within the Project Area and will be used to inform the mitigation design for wetland creation. The existing vegetative, soil, and hydrological conditions have helped guide what vegetation assemblages the Project will aim to re-establish post-construction that are suitable for the soil types and hydrologic conditions observed in the Project area.

GHD performed the Aquatic Resources Delineation (GHD 2023) within the Project Area in January 2023 during the winter wet season when accumulated precipitation was at or above average. A WETS table showing climate data for the Arcata Eureka Airport, CA, Station was referenced to confirm precipitation was within the limits of normal (NRCS 2023a). Aerial photography, NRCS Soil Survey for Humboldt County, Central Part, California (NRCS 2023b), the National Wetland Inventory (NWI 2023), and the FEMA National Flood Hazard Layer (FEMA 2023) were referenced prior to conducting fieldwork (GHD 2023). Wetland indicators for vegetation, soils, and hydrology were recorded in the field and are described below in **Section 3.2**.

The following sections present the location, function, and value of existing wetlands in the Project Area that are anticipated to be affected by implementation of the Project. Additionally, existing resources (i.e. wetland habitat, upland habitat surrounding wetlands) will be summarized, as they have informed the mitigation design for wetland creation.

2.2 Jurisdictional Areas

Existing Jurisdictional Wetlands Within the Project Area

A wetland delineation was completed in 2023 (**Appendix C**) to determine the extent of wetlands and other waters within the Project Area based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the *USACE Wetland Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (USACE 2010). Three-parameter wetlands are defined as areas that meet all three criteria for wetlands as described by the 1987 Manual and may be jurisdictional to USACE and NCRWQCB. One-parameter wetlands are defined under the McKinleyville Community Plan Section 3422 as areas satisfying at least one of the following three criteria: (1) the presence of at least periodic predominance of hydrophytic vegetation; (2) predominately hydric soils; (3) periodic inundation for seven consecutive days.

One three-parameter wetland area (Wetland 1) was mapped within the Project Area totalling 0.55 acres and is likely to be USACE and NCRWQCB jurisdictional, subject to agency determination. Two one-parameter wetland areas (Wetland 2 and Wetland 3) totalling 0.02 acres were mapped within the Project Area subject to regulation under the McKinleyville Community Plan (**Table 2.2-1, Delineated Wetlands Within the Project area**), and are not subject to USACE or NCRWQCB jurisdiction.

Table 2.2-1 Delineated Wetlands Within the Project Area

Wetland ID	Wetland Type		Total Delineated (square feet / acres)
Wetland 1	PEM1B Three-Parameter Wetland	USACE/NCRWQCB/ McKinleyville Community Plan	23,940 / 0.55
Wetland 2	One-Parameter Wetland	McKinleyville Community Plan	724 / 0.017
Wetland 3	One-Parameter Wetland	McKinleyville Community Plan	171 / 0.004

Approximately 14.13 acres of the Project Area were determined to be upland areas and did not meet any of the three parameters to be considered wetland. Some upland sample plots were dominated by invasive facultative pasture crops but lacked indicators for wetland hydrology and soils (GHD 2023). The sample points at locations where vegetation did not pass the prevalence index or FAC-neutral test and were not accompanied by indicators of wetland hydrology or hydric soils were not determined to consist of hydrophytic vegetation for the purposes of determining one-parameter wetlands under the McKinleyville Community Plan.

2.3 Existing Habitat Value and Function

The Project Area is within the Mill Creek-Mad River watershed (HUC12: 180101020408) and is primarily comprised of upland pasture dominated by non-native grasses dissected by a wetland swale running northwest through the property. A non-native eucalyptus grove comprises the northeast section of the Project Area and is expanding into the adjacent pastureland. Wetlands within the Project Area have likely been degraded over time by cattle grazing, surrounding development, and the introduction of non-native invasive species.

Three-Parameter Wetlands

For the purposes of this WHMMP, three-parameter wetlands are defined as areas that meet all three parameters (i.e. hydrophytic vegetation, hydric soils, and wetland hydrology) for wetland determination as defined in the USACE Wetland Delineation Manual (USACE 1987). One contiguous three-parameter wetland (Wetland 1) was mapped within the Project Area totalling 0.55 acres and likely jurisdictional to USACE and NCRWQCB (Appendix A, Figure 2).

Wetland 1 consists of an open wetland swale, mostly free of rooted woody vegetation and is classified according to the Cowardin system as a palustrine emergent persistent wetland with a seasonally saturated water regime (PEM1B) (FGDC 2013). The vegetation was primarily characterized by creeping bentgrass (*Agrostis stolonifera*, FAC, invasive non-native), common velvetgrass (*Holcus lanatus*, FAC, invasive non-native), and common rush (*Juncus effusus*, FACW, native). Sample points within Wetland 1 passed the dominance test for hydrophytic vegetation.

Soil in Wetland 1 consisted mostly of loams with a thick dark 10YR 2/1 upper horizon (0 to 16 inches) underlain by a depleted 10YR 4/1 lower horizon (4 or 6 to 14 inches) with 25% 10YR 6/8 distinct redoximorphic concentrations within the matrix. Soils within Wetland 1 satisfied the criteria for hydric soil indicator Thick Dark Surface (A12).

Observations of hydrology within Wetland 1 consisted primarily of the presence of surface water, saturation within 12 inches of the soil surface, and the presence of reduced iron within 12 inches of the soil surface verified by a positive

reaction to alpha, alpha-dipyridyl ($\alpha\alpha$ -dip). Sample points within Wetland 1 met primary wetland hydrology indicators Surface Water (A1), Saturation (A3), and Presence of Reduced Iron (C4), as well as secondary indicators Geomorphic Position (D2) and passing the FAC-Neutral Test (D5).

One-Parameter Wetlands

For the purposes of this WHMMP, one-parameter wetlands are defined as areas that meet one or two parameters (i.e. hydrophytic vegetation, hydric soils, and wetland hydrology) for wetland determination as defined in the USACE Wetland Delineation Manual (USACE 1987). Two separate one-parameter wetlands (Wetland 2 and Wetland 3) were mapped within the Project Area totaling 0.02 acres and are likely regulated under the McKinleyville Community Plan (Appendix A, Figure 2).

Wetland 2 met two wetland parameters, is comprised of 724 sqft, and is located at the at the northeast end of Wetland 1. Dominant vegetation within Wetland 2 consisted primarily of slough sedge (*Carex obnupta*, OBL, native), California blackberry (*Rubus ursinus*, FACU, native), and coastal willow (*Salix hookeriana*, FACW, native). Sample points within Wetland 2 passed the dominance test for hydrophytic vegetation.

Soils within Wetland 2 consisted of loams with a 10YR 2/1 upper horizon from 0-10 inches underlain by a 10YR 3/2 horizon from 10-13 inches with 5% 10YR 5/8 distinct redoximorphic features and a 2.5Y 5/4 depleted horizon from 13-20 inches with 30% 7.5 YR 5/8 distinct redoximorphic features. The 10YR 3/2 horizon from 10-13 inches had chroma too high to meet the Thick Dark Surface (A12) hydric soil indicator observed in adjacent wetlands within the PSB. Sample points within Wetland 2 did not meet any hydric soil indicators.

Observations of hydrology within Wetland 2 included of the presence of a water table at 15 inches from the soil surface, and saturated soil at 10 inches from the soil surface. inches of the soil surface. Application of $\alpha\alpha$ -dip tested negative throughout the soil profile. Sample points within Wetland 2 met primary wetland hydrology indicator Saturation (A3), as well as secondary indicator Geomorphic Position (D2).

Wetland 3 met two wetland parameters, is comprised of 171 sqft, and is located in a depression at the lower end of a shallow upland swale along the southern edge of the eucalyptus grove. There was evidence of mixed soil horizons in Wetland 3 indicating some level of mechanical disturbance or excavation likely causing the depression.

Dominant vegetation within Wetland 3 consisted primarily of blue gum eucalyptus (*Eucalyptus globulus*, UPL, invasive non-native), and sweet vernal grass (*Anthoxanthum odoratum*, FACU, invasive non-native). Sample points within Wetland 3 did not pass the dominance test or prevalence index for hydrophytic vegetation and lacked any other indicators for hydrophytic vegetation.

Soils within Wetland 3 consisted of loams with a 10YR 2/1 upper horizon from 0-10 inches directly underlain by a 10YR 4/1 depleted horizon form 10-16 inches with 5% 5 YR 5/8 distinct redoximorphic features. Sample points within Wetland 3 met hydric soil indicator Thick Dark Surface (A12).

Observations of hydrology within Wetland 3 included of the presence of a water table at 4 inches from the soil surface, and saturated soil at 1 inch from the soil surface. Application of $\alpha\alpha$ -dip tested positive at 12 inches from the soil surface. The sample point within Wetland 3 met primary wetland hydrology indicators High Water Table (A2), Saturation (A3), Algal Mat or Crust (B4), Presence of Reduced Iron (C4), as well as secondary indicators Water-Stained Leaves (B9) and Geomorphic Position (D2).

Other Waters

Other waters such as streams, lakes, and watercourses were not observed within the Project Area (GHD 2023). A roadside ditch along the south side of Hiller Rd. was determined to be an upland ditch dominated by upland vegetation including California blackberry (*Rubus ursinus*, FACU, native), salal (*Gaultheria shallon*, FACU, native), evergreen huckleberry (*Vaccinium ovatum*, FACU, native), red alder (*Alnus rubra*, FAC, native), reed fescue (*Festuca arundinacea*, FAC, invasive non-native) and bentgrass (*Agrostis stolonifera*, FAC, invasive non-native). The ditch does not meet the definition of Waters of the U.S. and/or Waters of the State and is not regulated by the McKinleyville Community Plan. The ditch drains into a 36-inch concrete culvert and flows into a roadside ditch north of Hiller Rd.

Upland Habitat

Uplands within the Project Area consists primarily of a eucalyptus grove and non-native pastureland. Dominant vegetation in upland areas were comprised of blue gum eucalyptus (*Eucalyptus globulus*, UPL, invasive non-native), California blackberry (*Rubus ursinus*, FACU, native), rattlesnake grass (*Briza maxima*, UPL, invasive non-native), sweet vernal grass (*Anthoxanthum odoratum*, FACU, invasive non-native), orchard grass (*Dactylis glomerata*, FACU, invasive non-native), evergreen huckleberry (*Vaccinium ovatum*, FACU, native), salal (*Gaultheria shallon*, FACU, native), bent grass (*Agrostis stolonifera*, FAC, invasive non-native), common velvetgrass (*Holcus lanatus*, FAC, invasive non-native), reed fescue (*Festuca arundinacea*, FAC, invasive non-native), red alder (*Alnus rubra*, FAC, native), and coastal willow (*Salix hookeriana*, FACW, native).

Soils in upland areas consisted mostly of loams with an upper horizon of 10YR 3/3 from 0 to 10 inches with no redoximorphic features, and a lower horizon from 10 to 18 inches of 10YR 3/4 with no redoximorphic features. Upland sample points in closer proximity to wetland areas had soils consisting of darker loams with an upper horizon of 10YR 2/2 from 0-19 inches, and a lower horizon of 10YR 4/3 with 30% redoximorphic features from 19-30 inches.

Hydrology observed in upland areas generally lacked the presence of surface water, high water table, soil saturation within 12 inches of the soil surface and had negative reactions to $\alpha\alpha$ -dip.

2.4 Project Impacts to Jurisdictional Wetlands

Impacts to Jurisdictional Wetlands within the Project Area

Based on the current design, the Project would permanently impact 17,870 sqft of delineated three-parameter wetlands and 895 sqft of one-parameter wetland areas. (**Table 2.4-1 – Impacts to Jurisdictional Wetlands**, **Appendix A, Figure 3a-3b**). Permanent fill of wetland areas would occur during construction of Project-related facilities within the Project Area (**Appendix A, Figure 3a-3b**). The filling of wetlands would be mitigated (including wetland setbacks of 50 feet) at approximately 1.5:1 ratio, which would be achieved by providing new wetlands (creation) onsite within the Project Area. The 1.5:1 mitigation ratio would create a significant ecological uplift with regard to the extent and quality of existing wetlands that will be filled, which are mostly non-native pasture grass and herb species.

Table 2.4-1	Impacts to	Jurisdictional	Wetlands
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Wetland ID and Type	Type of Impact (Permanent / Temporary)	Jurisdictional Entity	Current Estimated Impacts (square feet / acres)	Mitigation Area at 1.5:1 (square feet / acres)
Wetland 1: PEM1B Three-Parameter Wetland	Permanent (fill)	USACE/NCRWQCB/ McKinleyville Community Plan	17,870 / 0.41	26,805 / 0.62
Wetland 2: One- Parameter Wetland	Permanent (fill)	McKinleyville Community Plan	724 / 0.017	1,086 / 0.025
Wetland 3: One- Parameter Wetland	Permanent (fill)	McKinleyville Community Plan	171 / 0.004	257 / 0.006
				Total Mitigation Area Required: 28,148 / 0.65

Wetland Type Conversions to Jurisdictional Wetlands within the Project Area

Additionally, the Project seeks to convert 6,070sqft of delineated three-parameter palustrine emergent persistent wetlands with a seasonally saturated water regime (PEM1B) (**Table 2.4-2 – Approximate Impacts to Jurisdictional Wetlands, Appendix A, Figure 3a-3b**). The conversion area is entirely within the proposed mitigation site and would

be subject to the same success criteria as created wetlands. The conversion area seeks to enhance the value and function of existing wetlands by excavating the bottom pool of the wetland to approximately 1.0 ft below the wet season water table converting the water regime from seasonally saturated to seasonally flooded creating higher quantities of aquatic habitat for a longer duration of time throughout the season.

Table 2.4-2 Wetland Type Conversions of Jurisdictional Wetlands

Wetland ID and Type	Type of Conversion	Jurisdictional Entity	Conversion Area (square feet / acres)
Wetland 1: PEM1B Three- Parameter Wetland	PEM1B three-parameter wetland to PEM1C three-parameter wetland	USACE/NCRWQCB	6,070 / 0.139

3. Mitigation Plan

3.1 Mitigation Objectives

The overarching goal of the WHMMP is to ensure that potential impacts to aquatic resources resulting from Project implementation are successfully compensated as required by Project permits. The following compensatory mitigation objectives have been created for this WHMMP based off objectives detailed in the USACE Regional Compensatory Mitigation and Monitoring Guidelines (USACE 2015), Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2020), and the McKinleyville Community Plan (2017b) to guide the development of wetland and riparian habitat creation and monitoring methods and success criteria.

The following objectives will guide the creation of wetlands:

- -The acreage of three-parameter wetlands created onsite will be greater than the area of wetlands permanently impacted by Project construction by a ratio of 1.5:1 or greater.
- -Three-parameter wetlands created onsite will be dominated by native wetland species and have low target invasive plant cover.
- -Three-parameter wetlands created will show an improvement in quality compared to baseline conditions of existing wetlands.

Please see Appendix A, Figure 3 for a map depicting areas proposed for wetland creation.

3.2 Mitigation Ratio and Credits

The proposed mitigation ratio for the filling of wetlands within the Project Area is 1.5:1. The ratio was selected to offset all anticipated impacts to aquatic resources within the Project Area, increase the total area of wetland habitat available within the Project Area and provide ecological uplift. Ecological uplift relates to increasing the quality of impacted wetlands by creation wetlands and establishing native wetland vegetation and habitat while increasing the function by increasing the duration of saturated conditions within the created wetlands by altering the wetland hydrologic regime.

For compensatory mitigation of permanently impacted wetlands, the mitigation is onsite, in-kind and adjacent to the same wetland type (palustrine emergent) that is being established. The proposed compensatory mitigation site will create a larger quantity and higher quality three-parameter wetlands along the edges of the existing wetland swale at the northwest corner of the Project Area (**Appendix A, Figure 3a-3b**).

Current grading calculations anticipate approximately 17,840 sqft of permanent impacts to USACE/NCRWQCB jurisdictional three-parameter wetlands and 895 sqft of one-parameter wetlands regulated under the McKinleyville Community Plan. Impacts to both three-parameter wetlands and one-parameter wetlands will be mitigated for in the creation of three-parameter wetland areas at a 1.5:1 ratio.

The proposed mitigation area is 28,750 sqft, approximately 600 sqft larger than the total mitigation area required at a 1.5:1 ratio, and will increase the likelihood of achieving success criteria. Mitigation will be achieved by creating new onsite three parameter wetlands detailed in **Table 3.2-1** below.

Table 3.2-1 Summary of Proposed Mitigation Areas

Current Use/Existing Habitat	Proposed Mitigation Habitat	Proposed Action	Location (Latitude/ Longitude)
Upland pasture habitat (28,750 sqft)	Three-parameter PEM1C wetland habitat.	Create three-parameter PEM1C wetlands by excavating below the high water table and planting native wetland vegetation.	40.941795,-124.105720
Three-parameter PEM1B wetland habitat (6,070 sqft)	Three-parameter PEM1C wetland habitat	Create three-parameter PEM1C wetlands by excavating below the high water table and planting native wetland vegetation	40.941395, -124.105482

3.3 Wetland Creation

Project-related development will require filling wetlands. Based on the current conceptual plan, approximately 17,870 sqft of three-parameter wetlands and 895 sqft of one-parameter wetlands will be filled (**Appendix A, Figure 3a-3b**). The filling of wetlands will be mitigated for at a 1.5:1 ratio, which will be achieved by creating approximately 28,750 sqft of new three-parameter wetlands and will include mitigation areas for impacts to both one and three-parameter wetland areas. New wetland areas will be created in upland areas adjacent to existing wetland areas located in the northwest section of the Project Area. Proposed wetland creation consists of the expansion of existing wetland areas at the bottom of the wetland swale by excavating uplands adjacent to the swale and replanting of the excavated areas with native wetland plant species. The proposed hydrologic design results in a consistent and relatively simple management of natural processes, leading to a high likelihood of success.

On-site and in-kind creation of palustrine emergent wetland habitat with native wetland plant species is proposed to compensate for the impact to wetlands during Project construction. The conceptual design of the wetland creation site is described below.

3.4 Wetland Creation Site Selection

The proposed wetland creation site expands existing wetlands within the Project Area (**Appendix A, Figure 3a-3b**). The location was chosen based on topography and water table data obtained from groundwater sampling points in those areas. The wetland creation site is directly adjacent to, and will become integrated with, the larger palustrine emergent three-parameter wetland swale that comprises Wetland 1 (**Appendix A, Figure 2**).

In order to ensure successful design and implementation of created three-parameter wetlands, the proposed ground surface elevation will be excavated to approximately 1.0 ft below the average wet season water table at the lowest point of the created wetland. Design criteria was modelled after juxtaposed wetlands in the Project Area, both topographically and through groundwater sampling of upland areas. The mitigation sites are currently set at or below the elevation of the adjacent wetlands in the Project. Current drainage patterns at the mitigation sites are surface overflow and groundwater conveyance from the surrounding slopes to the north and west sections of the Project Area,

which drain generally northwest toward Hiller Rd. The wetland mitigation sites are situated at the bottom slope of the wetland swale and will be fed primarily through groundwater discharge in winter, promoting success of establishment.

Groundwater Sampling

In addition to groundwater observations made during the wetland delineation (GHD 2023), five additional groundwater sampling points were taken within the proposed mitigation areas on March 3, 2023. The groundwater monitoring points were located in mapped uplands within the proposed wetland creation area to determine the approximate depth to groundwater during the wet season. This information will be used to guide the wetland creation design by confirming the approximate depth at which created wetlands need to be excavated to achieve adequate hydrology for wetland success (groundwater with 12 inches of the surface for 14 consecutive days).

Sampling occurred on March 3, 2023 after significant precipitation events including low elevation snowfall within the Project Area. Precipitation was above average according to the WETS table for Arcata/Eureka Airport in McKinleyville CA and groundwater depth may have been abnormally high at the time of sampling (**Appendix B**). The sampling results detailed below suggest there will be adequate groundwater in wetland mitigation areas to achieve wetland hydrology success criteria. Observed depth to groundwater for each groundwater monitoring point is recorded below in **Table 3.4-1.**

Table 3.4-1 Groundwater Sampling Points

Groundwater Sampling Point	Depth to Groundwater (in)	Location (Latitude/ Longitude)
1	4	40.941184, -124.106099
2	12	40.941932, -124.106188
3	11	40.941876, -124.105706
4	6	40.941753, -124.105551
5	6	40.941916, -124.105223

3.5 Wetland Creation Conceptual Design

Wetland Mitigation Site 1-Three-parameter wetland habitat and pond

Wetland Mitigation Site 1 will be excavated to a depth of approximately 1.0 ft below the average wet season water table at the pond bottom, at the average wet season water table at the wetland habitat bottom, with sides at a 3:1 slope to the top of slope at the existing ground level. A conceptual design for Wetland Mitigation Site 1 is detailed in the figure below:

Conceptual Design Cross Section Elevation Relative Zone 5 (Top) Zone 4 (Upper Slope) Zone 4 (Upper Slope) Zone 4 (Upper Slope) Zone 3 (Lower Slope) Zone 3 (Lower Slope) Zone 3 (Lower Slope) Zone 2 (Wetland) (Wetland) (Wetland) (Wetland) Zone 3 (Lower Slope) Zone 3 (Lower Slope) Zone 3 (Lower Slope) Zone 4 (Upper Slope) Zone 5 (Top Zone 1 (Pond) Zone 2 (Zone 2 Zone

Figure 3.5-A: Wetland Mitigation Site 1, Three-Parameter Wetland Habitat and Pond Conceptual Design

Wetland Mitigation Planting Zones

Planting zones at the wetland mitigation sites have been separated into five planting zones as depicted above in **Figure 3.5-A**. The following steps will be taken to revegetate the mitigation wetland:

Planting Zone

Water Table (Wet Season)

- 1. Hydromulch Zone 3 to Zone 4 (toe of slope up to top of the existing grade) with wetland edge seed mix (**Table 3.5-3**)
- 2. Plant Zone 1 to Zone 3 (bottom and halfway up the sides) with plugs (Table 3.5-1)
- 3. Scarify Zone 5 around the edge of the wetland (10-15 feet from edge) and plant ReGreen at 35 lbs./acre and native grass seed at 25 lbs./acre.

As the Project design progresses, the plans and specifications for the following details will be included:

- 1. Planting schedule
- 2. Piezometer locations
- 3. Grading plan details

The excavated area will be planted with the following species found in **Table 3.5-1** using container stock. The proposed planting list for wetland creation was based on the dominant native species composition present in adjacent wetland habitats as described in the wetland delineation report (GHD 2023), as well as the addition of other native wetland species observed on-site in lesser amounts. Hydroseeding will be used in conjunction with broadcast seeding along the edges of the mitigation sites. Hydromulch will be applied in a single application at a rate of 2,500 lbs/acre after broadcasting of seed mixes. The mulch will consist of natural sterile fiber, be free of synthetic materials (i.e. plastic), and contain no more than seven percent ash or 250 parts per million of boron. Hydroseeding will be done in October-November at the beginning of the rainy season for optimal seed germination.

Table 3.5-1 and **3.5-2** below detail the suggested planting list and Wetland Indicator Status as defined by the USACE 2020 Western Valleys, Mountain, and Coasts (WMVC) designation. The planting zones coincide with those depicted in **Figure 3.5-A: Wetland Mitigation Site 1, Three-Parameter Wetland Habitat and Pond Conceptual Design.**

Table 3.5-1 Planting Treatments for Wetland Mitigation Planting Zones

Scientific name	Common name	Lifeform	WMVC Indicator	Unit	Spacing	# per acre
			Status			
Zone 1: Planting List fo	r Pool Bottom (Lowe	st Ponding Area	a)			
Carex obnupta	Slough sedge	Perennial sedge	OBL	plug	3 ft	970
Eleocharis macrostachya	Spike rush	Perennial sedge	OBL	Plant band	3ft	970
Oenanthe sarmentosa	Water parsley	Perennial herb	OBL	plug	3ft	970
Zone 2: Planting List fo	r Wetland Bottom (Ed	dge of Pond to	Γoe of Slope)			
Carex obnupta	Slough sedge	Perennial sedge	OBL	plug	3 ft	970
Juncus effusus var. pacifica	Pacific rush	Perennial rush	FACW	plug	3 ft	970
Zone 3: Planting List fo	r Lower Sides and Ed	dges (Toe of Sic	pe to Lower 50%	of Slope)		
Carex obnupta	Slough sedge	Perennial sedge	OBL	plug	3 ft	970
Salix hookeriana	Coastal Willow	Shrub	FACW	Cutting	15 ft -north and west side only	80
Spiraea douglasii	Rose spirea	Shrub	FACW	1-gal	15 ft	80
Native grass seed- single species or mix	Recommended genera include: Bromus, Elymus, Festuca, etc.	Grass	FACU/UPL	lb	95% cover	25 lbs
Hydro-mulch	mulch	N/A	N/A	lb	95% cover	2,500 lbs
Zone 4: Planting List fo	r Upper Sides and Ed	iges (Upper 50%	% of Slope to Top	of Slope)		
Ribes sanguineum	Flowering currant	Shrub	FACU	5-gallon	15 ft	80
Salix hookeriana	Coastal Willow	Shrub	FACW	Cutting	15ft – north and west side only	80
Salix sitchensis	Sitka Willow	Shrub	FACW	Cutting	15 ft- north and west side only	80
Symphyotrichum chilense	Pacific aster	Perennial herb	FAC	plug	3 ft	970
Native grass seed- single species or mix	Recommended genera include: Bromus, Elymus, Festuca, etc.	Grass	ass FACU/UPL lb 95% c		ACU/UPL lb 95% cover 25 ll	
Hydro-mulch	mulch	N/A	N/A	lb	95% cover	2,500 lbs

Scientific name	Common name	Lifeform	WMVC Indicator Status	Unit	Spacing	# per acre						
Zone 5: Planting List for Top of Slope (Top of Slope to 15 feet)												
Alnus rubra	Red alder	Tree	FAC	1-gal	20 ft	25						
Pinus contorta ssp. Contorta	Beach pine	Tree	FAC	5-gal	20 ft	25						
Native grass seed- single species or mix	Recommended genera include: Bromus, Elymus, Festuca, etc.	Grass seed	FACU/UPL	lb	95% cover	25 lbs						
ReGreen©	Sterile grass mixture	N/A	N/A	lb	95% cover	35lbs						
Hydro-mulch	mulch	N/A	N/A	lb	95% cover	2,500 lbs						

Table 3.5-2 USACE Wetland Indicator Status Definitions for WMVC

Indicator Status	Abbreviation	Definitions
Obligate	OBL	Almost always occur in wetlands.
Facultative Wetland	FACW	Usually occur in wetlands, but may occur in non-wetlands.
Facultative	FAC	Occur in wetlands and non-wetlands.
Facultative Upland	FACU	Usually occur in non-wetlands, but may occur in wetlands.
Upland	UPL	Almost never occur in wetlands.

Seed Mixes and Mulch

The seed mix in **Table 3.5-3** is recommended for Planting Zones 3-5 along the wetland edge. The seed mix in **Table 3.5-3** is recommended for upland slopes along the wetland edge. Immediately following grading, a weed free straw will be applied at approximately 2,500 pounds per acre to promote seed germination and erosion control. Woody vegetation removed from the within the limits of grading will be chipped into mulch, placed in small temporary piles and reapplied around the container plantings.

Table 3.5-3 Wetland Edge Seed Mix

Scientific name	Common name	Lifeform	Pounds of Pure Live Seed/Acre
Grass Seed			
Bromus carinatus	California brome	Perennial grass	8.3
Elymus glaucus	Blue wildrye	Perennial grass	8.3
Festuca microstachys	Small fescue	Perennial grass	8.3

4. Mitigation Maintenance Plan

4.1 Revegetation and Post-Planting Maintenance

Revegetation will occur in fall and winter months following earth work and will be timed with hydrologic conditions to maximize plant survival. Irrigation is not planned but may occur based on the installer (contractor) procedures. Each planting will be watered the day of planting, regardless of soil moisture at the time of planting.

The Applicant shall inspect all deliveries of the container plantings prior to installation to ensure (1) accurate quantities, (2) correct species, (3) vigor (root growth and overall health), and (4) that all plant material is visibly free of pests and diseases.

Wetland revegetation will focus on appropriate native species, as described in **Section 3.5**. Following initial construction, the mitigation area is expected to be self-maintaining and dynamic into the long-term future. The wetlands will be self-sustaining and no watering or maintenance activities such as mowing, or pruning would be needed to maintain the wetlands. The planting lists do not include any particularly aggressive species and were chosen based on the baseline information gathered from previous studies (GHD 2023).

Planting holes will be no deeper than the container and twice as wide. Each tree and shrub planted will receive one to two packets of mycorrhizae. Trees and shrubs planted will be protected from deer browsing with anti-browse cages, excluding and will be mulched around the base post-planting.

Weeds will be removed at the base of each plant while plants are becoming established. Weeding will occur in the spring of each year after the first year of establishment (beginning the second spring). Weeds within a 3x3 foot area around the base of each planted tree and shrub will be pulled by hand, collected, and disposed of at an acceptable offsite location.

4.2 Invasive Species Controls

Over the course of the monitoring period, invasive species encroachment will be assessed. Invasive non-native plants can inhibit successful establishment of native species, and therefore reduce the value of the created wetland habitats. Invasive species that will be targeted for removal include those with Cal-IPC moderate to high ratings. Species with a Cal-IPC rating of limited may also be targeted for removal but will not be considered in success criteria assessments as their ecological impacts are considered minor. Removal methods will primarily include hand removal with brush cutters and removal of the entire root mass.

Invasive species observed in the Project Area (GHD 2023a) that are listed in the Cal-IPC inventory are detailed in **Table 4.2-1 below.**

Table 4.2-1 Cal-IPC Rated Species Observed within the Project Area

Scientific Name	Common Name	Lifeform	Cal-IPC Rating
Agrostis stolonifera	Creeping bentgrass	Grass	Limited
Anthoxanthum odoratum	Sweet vernal grass	Grass	Limited
Briza maxima	Rattlesnake grass	Grass	Limited
Cortaderia selloana	Pampasgrass	Grass	High
Cirsium vulgare	Bull thistle	Herb	Moderate
Cytisus scoparius	Scotch broom	Shrub	High
Dactylis glomerata	Orchard grass	Grass	Limited
Eucalyptus globulus	Blue gum	Tree	Limited
Festuca arundinacea	Reed fescue	Grass	Moderate

Scientific Name		Common Name	Lifeform	Cal-IPC Rating						
Geranium dissectum		Cutleaf geranium	Herb	Limited						
Holcus lanatus		Common velvetgrass	Grass	Moderate						
Hypochaeris raditata		Rough cat's ear	Herb	Moderate						
Leucanthemum vulgare	е	Ox-eye daisy	Herb	Moderate						
Ranunculus repens		Creeping buttercup	Herb	Limited						
Rumex acetosella		Sheep sorrel	Herb	Moderate						
Rumex crispus		Curly dock	Herb	Limited						
Rubus armeniacus		Himalayan blackberry	Shrub	High						
Footnotes: Cal-IPC Ratio	ng Definit	tions								
*High	structure		ets on physical processes, plant and a er attributes are conducive to modera cologically.							
*Medium	plant an conduci	nd animal communities, and vegetation we to moderate to high rates of dispe	nt-but generally not severe-ecological on structure. Their reproductive biolog rsal, though establishment is general oution may range from limited to wide:	y and other attributes are ly dependent upon ecological						
*Limited	informati invasive	These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.								

5. Mitigation Monitoring Plan

5.1 Monitoring Plan

Life Plan Humboldt or its qualified designee will maintain the Project mitigation sites over the course of the five-year monitoring period and will maintain them in such a way to meet success criteria, including the treatment of invasive plant species by hand or handheld equipment such as weed whackers. All maintenance activities within the designated monitoring areas will be documented and included in the annual monitoring report. If monitoring and/or observations yield a deficiency or adverse conditions among planted vegetation, then supplemental planting would occur. Similarly, if a particular species is not doing well at the sites, a suitable replacement species can be supplemented for original plant species.

Monitoring will occur annually to document overall site conditions, and should include an assessment of:

- mitigation site plantings overall vigor and health, and recommendations for corrective action if a site is observed to be failing.
- photo documentation at each established photo point.
- notable encroachment of non-native species into a mitigation area.
- removal of non-native species from mitigation areas.
- disturbance around or within the mitigation sites (i.e., browsing of plants, trampling, or other disturbance).
- •
- any other pertinent information regarding the overall success of the mitigation areas.

An annual monitoring report will be submitted to NCRWQCB summarizing each monitoring event, to be submitted at the end of the calendar year in the year following mitigation site planting.

Monitoring in Year 1, Year 3, and Year 5 will include additional environmental data collection that will support the analysis of performance criteria set forth for each mitigation site, as described in **Section 7**. The additional environmental data collection will include:

- vegetation sampling according to methods outlined in this document for all wetland mitigation sites.
- hydrology monitoring according to methods outlined in this document for all wetland mitigation sites.

All data collection from these monitoring years will be analysed and compared to the performance criteria set forth for that habitat type in that year. Following monitoring, Life Plan Humboldt will submit to the Regional Board, the County and USACE one report summarizing (1) vegetation and hydrology monitoring methods, (2) results, and (3) and any necessary adaptive management, such as targeted replanting, removal of invasive species, or future considerations for design adjustment, to better achieve Project objectives.

Reporting will include captioned photographs (including those taken at established photo points) and mapping results, if needed. Reporting will also highlight how the Project area has changed since as-built construction, including all information outlined to be included in each annual monitoring report. The Site Monitoring Report will be submitted to the Regional Board, County and USACE by the end of year.

In Year 5, a wetland delineation will confirm the area of wetlands created. The report should make a thorough analysis of whether the mitigation is successful and if on-going monitoring is required. A separate wetland delineation report will be prepared to document the results of the wetland delineation effort.

Annual reports will be prepared and submitted to the Regional Board, County and USACE no later than December 31 of each year, for a total of five reports over the monitoring period. Reports will include observations made during site monitoring, including descriptions of conditions on site, identified issues, outlined remedial measures implemented or needed, and photographs of the mitigation area(s).

5.2 Monitoring Methodology

Annual monitoring of created wetlands within the mitigation area will be conducted per the monitoring schedule detailed in **Table 5.4.1** to evaluate progress toward success and performance criteria summarized in **Table 7.1-1**.

Vegetation Monitoring Methodology

Vegetation sampling will use quadrats (1m²) located randomly along transects within the created wetland area. The location of the first quadrat will be randomized relative to the beginning of the baseline, with quadrats at set distances thereafter. All plant species present within each quadrat will be identified and their absolute percent cover noted, along with total absolute vegetative cover and bare soil within each quadrat. The number of quadrats sampled will be sufficient to achieve an adequate sample size. Relative percent cover of native species will be calculated post-site visit using absolute cover.

Target invasive plant cover will be calculated from the data collected, as described above. Each year of data collection, the absolute cover of CAL-IPC medium to high ranked invasive species will be compared. The timing of monitoring visits will be flexible for annual variation in weather conditions and will likely take place in June, July, or August.

The most current wetland indicator plant list will be used to determine the ranking of species present in the mitigation areas during monitoring. Wetland species are defined as those rated with the indicator status FAC, FACW, or OBL by the most current wetland indicator plant list: *National USACE 2020 Wetland Plant List* (USACE 2020).

Some flexibility to account for annual variation in weather conditions is acceptable but vegetative monitoring should be conducted in June, July, or August.

Data sheets with results from each quadrat sampled during each site visit will be included as an appendix submitted with each annual report, and an analysis of results compared to the performance criteria summarized in **Table 7.1-1**.

Soil Monitoring Methodology

Hydric soil indicators may take more time develop than what is within the anticipated timeframe for monitoring activities. Hydric soils will be assumed if wetland hydrology and hydrophytic vegetation are present.

Hydrology/Groundwater Monitoring Methodology

Wetland mitigation site elevations shall be within ranges that maintain suitable groundwater wetland hydrology, as defined by the USACE. The U.S. Army Corps of Engineers (2005) provides a technical standard for monitoring hydrology. This standard requires 14 or more consecutive days of flooding or ponding, or a water table within 12 inches of the soil surface, during the growing season at a minimum frequency of five years in ten (50 percent or higher probability) (National Research Council 1995).

Piezometers will be installed post-construction to monitor groundwater elevations. Groundwater will be monitored once 50 percent of the average annual rainfall has been met, for four (4) consecutive weeks (Day 0, 7, 14, and 21), or until success criteria has been met (a minimum of three monitoring events or two weeks), after the 50 percent of average annual rainfall. A WETs table for the Arcata Airport Station in McKinleyville, CA will be referenced to determine if rainfall averages are normal for the given year.

A staff gauge will be installed at the site of the pond.

Post-construction hydrology monitoring at the site will be implemented to monitor groundwater levels. Hydrology will be monitored in Year 1, Year 3, and Year 5.

Photo Monitoring Stations

Permanent photo-documentation points will be established within the project site. A minimum of one photopoint is required for each monitored created wetland unit. Photopoint locations will be included on a map that will accompany monitoring reports.

Photographs will be taken annually during the monitoring period. Photographs will be taken from each monitoring point and cardinal directions recorded for repeatability. Photos will be taken with a digital camera with a moderate wide angle lens. The make and model of camera and type and focal length of lens will be noted in monitoring documentation. Photographs will be taken from about five feet in height, ideally from a tripod with the height noted, consistent from year to year.

5.3 Reference Sites

All existing wetlands on-site will be impacted by the proposed Project or converted to other types of wetlands. There will be no suitable on-site reference area for which to compare the created wetlands. Baseline conditions were characterized in the LPH Aquatic Resource Delineation (GHD 2023) and success will largely be determined with the criteria listed in **Section 7**.

5.4 Timeline and Monitoring Schedule

Construction is anticipated to occur within one or two construction seasons in 2024 or 2025. Mitigation monitoring will commence the year following construction.

Table 5.4-1 Annual Monitoring and Reporting Schedule

Monitoring Year	Summary of Conditions On-site	Vegetation Sampling	Hydrology Sampling	Report
Year 1	X	X	X	Baseline summary of conditions on-site in each mitigation area. Results from hydrology and vegetation monitoring.
Year 2	X			Baseline summary of conditions on-site in each mitigation area.
Year 3	X	X	X	Baseline summary of conditions on-site in each mitigation area. Results from hydrology and vegetation monitoring.
Year 4	Х			Baseline summary of conditions on-site in each mitigation area.
Year 5	х	Х	X	Baseline summary of conditions on-site in each mitigation area. Results from hydrology and vegetation monitoring, and analysis of success of mitigation sites.
Ye	ar 5 Wetland Deli	Perform wetland delineation per USACE protocols in Year 5 and submit separate wetland delineation report documenting findings.		

6. Adaptive Management Plan

Adaptive management is a tool used to cope with the inherent changes and instability fundamental to natural resources and the ecological processes that encompass them. It is a process derived from a collection of practical methods based in research and monitoring. As a philosophy, it holds that conservation and restoration programs should be designed in ways that accumulate knowledge as quickly and accurately as possible so that the management plan can be adapted promptly to better management efforts. This approach allows managers to learn by experience within site specific environments and apply lessons learned to remedy deficiencies using a controlled and scientific approach.

Adaptive management procedures will be recommended on a case-by-case basis, to address any issues identified at the sites during monitoring or maintenance activities. Adaptive management actions could include one or more of the following activities (not exclusive) if success criteria are not met:

- Adjusted weeding method to reduce weeds around the planted wetland or upland to decrease competition from non-native grasses and forbs;
- Supplemental planting for areas that have deficiencies in the seeding or planted material stock (may be inkind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
- Supplemental replacement (may be in-kind, or if a particular species is not doing well at the site, a suitable replacement species can be supplemented for original plant species);
- Supplemental watering (for non-performing plants that required supplemental planting);

- Additional erosion control; and/or
- Hydrologic modification or minor regrading.

Unpredictable natural changes could alter the mitigation area and consequently necessitate changing the goals, objectives, strategies, and actions set forth in this plan. These changed conditions include but are not limited to:

- Unusual weather patterns, such as extended drought or excessive rainfall;
- Change in species composition, such as through invasion of a new invasive plant or wildlife species to the
 site, increase in spread of existing non-native plants rated as limited in **Table 4.2-1** which exhibit similar
 adverse characteristics of a plant ranked moderate or high in this particular habitat setting, or a change in the
 ranking of invasive plants;
- Change in the listing of species status species that could occur or have potential to occur in the habitat mitigation area; or;
- · Erosion or deposition of sediments.

Adaptive management may be implemented if the mitigation ratios are not achieved after a period of five years, as detailed in submitted monitoring reports. If adaptive management is determined to be necessary, appropriate regulatory agencies will be consulted to propose any necessary remedial action. A meeting will then be scheduled with the appropriate resource agencies, depending on the specific issue(s), to discuss the best method(s) to address the issue.

7. Final Success Criteria/Performance Standards

7.1 Wetland Success Criteria

The wetland area that will be monitored for performance includes the bottom of the pool to the outer toe of the excavated slope and will coincide with Zone 1 and Zone 2 of the **Three-Parameter Wetland Habitat and Pond Conceptual Design**, detailed in **Section 3.5**, **Figure A**. The pond and wetland area will be the area targeted as the three-parameter wetland boundary by Year 5 (also see **Appendix A**, **Figure 3**).

The wetland mitigation will be considered successful when:

• The three-parameter wetland creation site hosts at least 70 percent relative cover of native wetland species (and no more than 15 percent absolute cover of target invasive species), supports wetland hydrology, and 28,148 sqft of three-parameter wetlands are created (to be assessed with a wetland delineation in Year 5).

Vegetation Success Criteria

The mitigation site will be considered successful if at least 70 percent relative cover of native wetland species and no more than 15 percent absolute cover of target invasive species are present at the conclusion of the 5-year monitoring period.

Soils Success Criteria

Hydric soil indicators may take more time develop than what is within the anticipated timeframe for monitoring activities. Hydric soils will be assumed if wetland hydrology and hydrophytic vegetation pers.

Hydrology Success Criteria

The mitigation site will be considered successful if two out of three wet season hydrology events meet wetland hydrology standards.

Annual monitoring of created wetlands will be conducted to evaluate achievement of vegetation and hydrology success criteria. The wetland mitigation site post-planting shall meet the following criteria described in **Table 7.1-1**.

Table 7.1-1 Performance Standards for Wetland Creation Sites

Year	Success Criteria Description								
Year 1	50 percent (≥) relative cover¹ of native wetland species.								
	No more than 25 percent absolute cover ² of target invasive plants.								
Year 3	60 percent (≥) relative cover of native wetland species.								
	No more than 20 percent absolute cover of target invasive plants.								
Year 5	70 percent (≥) relative cover of native wetland species.								
	No more than 15 percent absolute cover of target invasive plants.								
	Wetland hydrology is met for two out of three monitoring events.								
Years 1, 3, and 5	•Native wetland species consist of OBL/FACW/FAC species.								
	•No large non-vegetated bare spots (greater than 25 percent) or erosional area.								
 Relative cover refers to a proportion cover present. 	of absolute cover of intended vegetation category (i.e., native cover) to total vegetative								
2 Absolute cover is the proportion of ground surface covered by a particular category of vegetation.									

If the success criteria for vegetation and hydrology in created wetlands are met by Year 5, and a wetland delineation confirms successful establishment of 28,148 sqft of three-parameter wetland, then the mitigation project will be considered successful, and monitoring will be complete at Year 5.

If at the end of Year 5, the performance standards have not been met, then additional monitoring and adaptive management will continue until performance criteria have been met. The prior year monitoring report will state whether the Project is on track to meet the success criteria or whether corrective actions will be necessary in order to meet the Year 5 success criteria. If all success criteria are met in earlier years, this will be demonstrated in the report, and monitoring will cease.

8. Site Protection Instrument

A site protection instrument (e.g., deed restriction) is required to protect the wetland mitigation site in perpetuity, per section 230.97(a) (Site protection) of the Procedures (2019), which states:

(4) Site protection instrument. A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 230.97(a)).

The applicant shall comply with the Project Deed Restriction. A copy of the signed, notarized, and filed Deed Restriction must be submitted to the Regional Water Board no less than 10-working days prior to Project

commencement. The Deed Restriction addresses the wetland mitigation site located at the northern end of the Project area.

9. Responsible Parties

It will be the responsibility of Life Plan Humboldt to monitor the areas identified in this Plan.

10. Scope and Limitations

This report: has been prepared by GHD for Life Plan Humboldt and may only be used and relied on by Life Plan Humboldt for the purpose agreed between GHD and Life Plan Humboldt.

GHD otherwise disclaims responsibility to any person other than Life Plan Humboldt arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

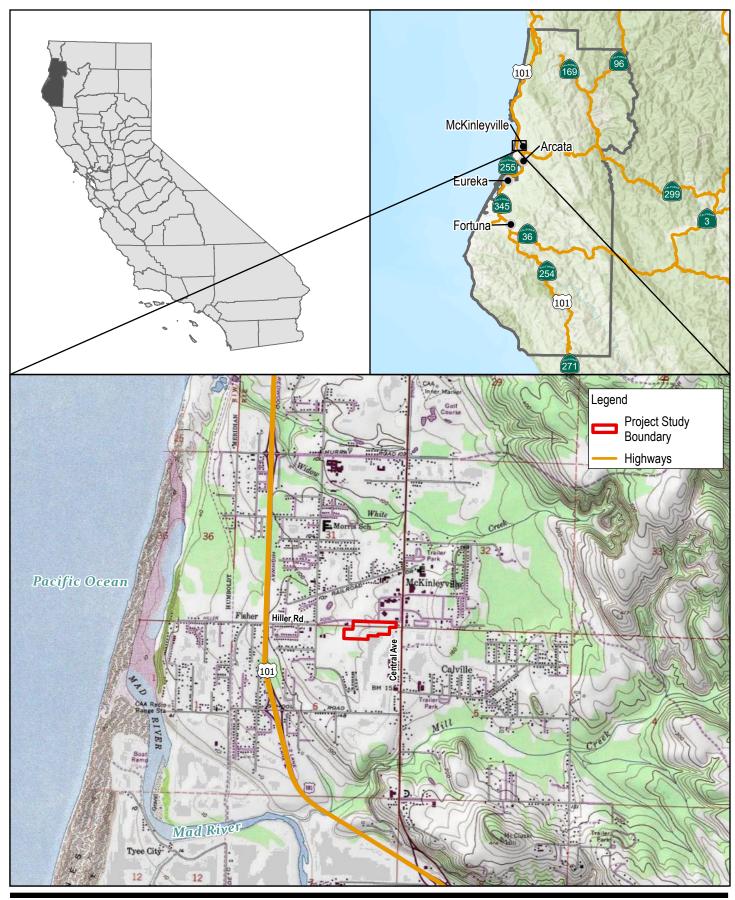
Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

11. References

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Appendix A Figures





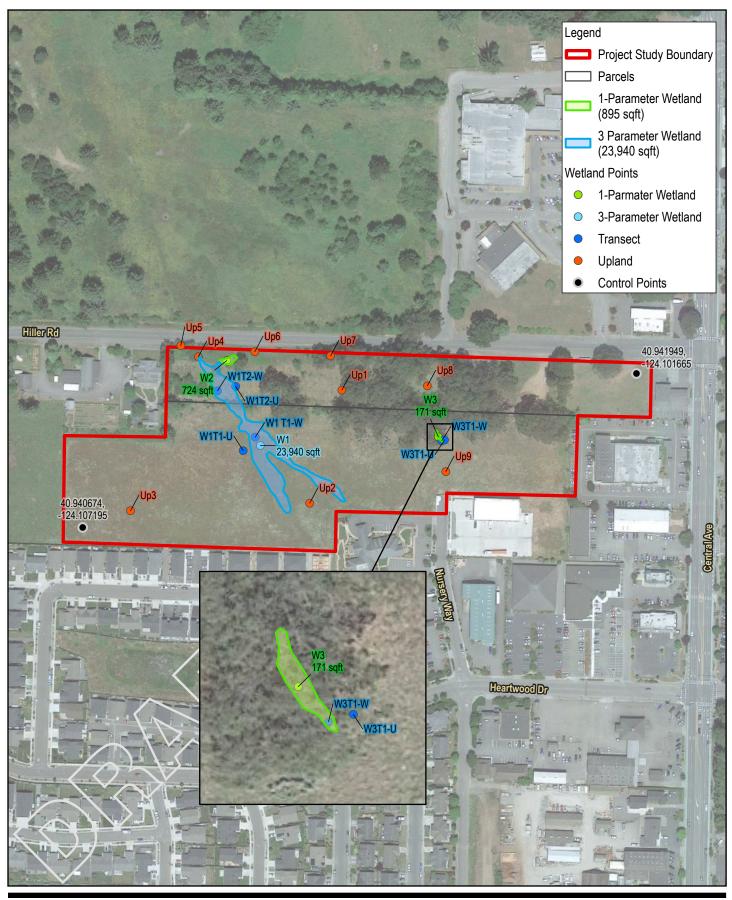
Map Projection: Mercator Auxiliary Sphere Horizontal Datum: WGS 1984 Grid: WGS 1984 Web Mercator Auxiliary Sphere



Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville

Project No. 12603187 Revision No.

Date Feb 2023





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



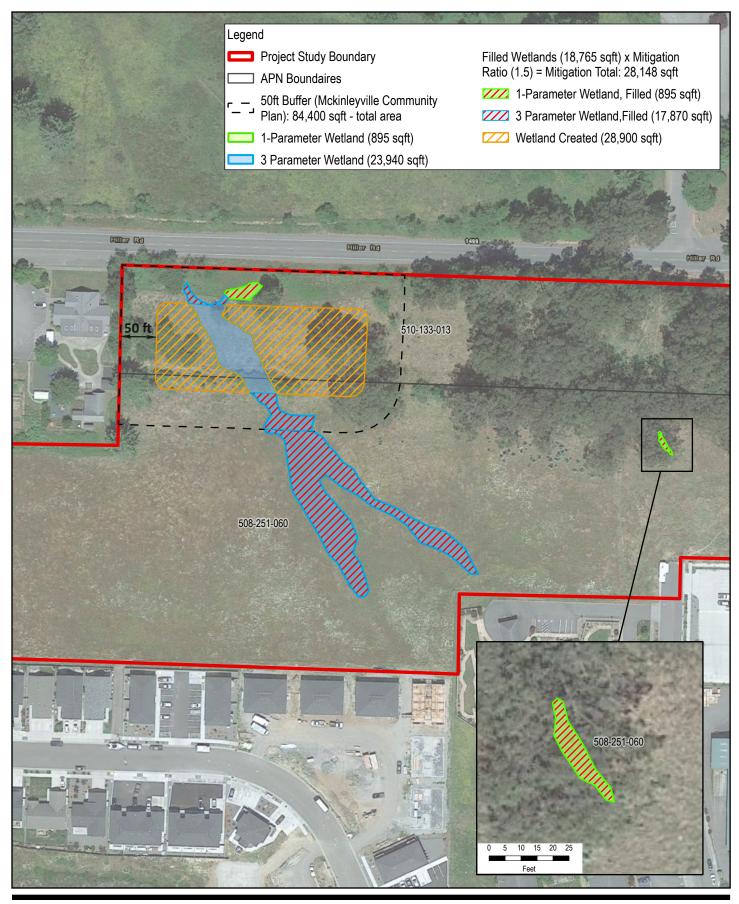


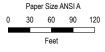
Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville Project No. 12603187 Revision No. -

Date Feb 2023

Wetland Delineation

FIGURE 2





Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

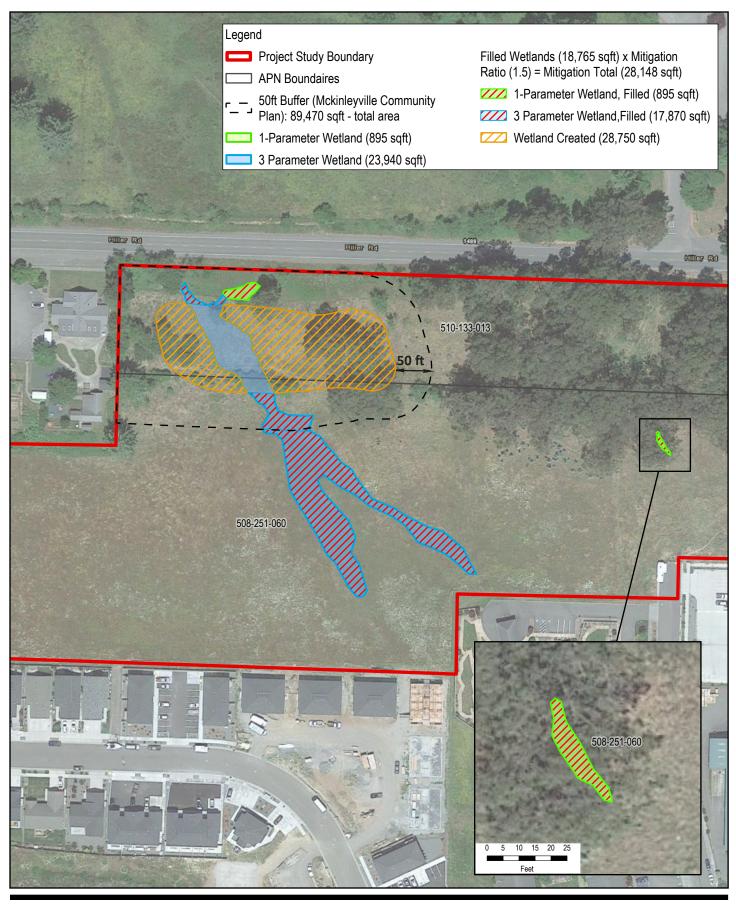


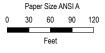
Life Plan Humboldt Wetland Delineation Mitigation and Monitoring Plan

Wetland Mitigation Area
Alternative 1

Project No. 12603187 Revision No. -Date Mar 2023

FIGURE 3A





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





Life Plan Humboldt Wetland Delineation Mitigation and Monitoring Plan

Wetland Mitigation Area Alternative 2

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FIGURE 3B

Appendix B

NRCS National Water and Climate Center WETS Table

WETS Station: ARCATA EUREKA AP, CA													
Requested years: 2003 - 2023													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	55.9	40.0	47.9	6.80	4.36	8.18	11	-					
Feb	55.1	38.9	47.0	5.83	3.06	7.12	10	-					
Mar	55.8	40.7	48.2	6.59	4.55	7.85	12	-					
Apr	56.8	42.1	49.4	4.23	2.57	5.12	9	-					
May	58.9	45.7	52.3	1.89	0.83	2.31	5	-					
Jun	62.3	48.5	55.4	1.07	0.35	1.22	2	-					
Jul	63.0	51.2	57.1	0.20	0.06	0.21	0	-					
Aug	63.9	51.4	57.6	0.20	0.05	0.21	0	-					
Sep	64.7	48.3	56.5	-	-	-	-	-					
Oct	62.7	45.3	54.0	3.14	1.12	3.79	5	-					
Nov	58.1	41.6	49.9	5.32	3.81	6.29	10	-					
Dec	54.9	39.2	47.0	8.56	5.53	10.30	13	-					
Annual:					-	-							
Average	59.3	44.4	51.9	-	-	-	-	-					
Total	-	-	-	-			-	-					
GROWING SEASON DATES													
Years with missing data:	24 deg = 1	28 deg = 1	32 deg = 1										
Years with no occurrence:	24 deg = 19	28 deg = 5	32 deg = 0										
Data years used:	24 deg = 20	28 deg = 20	32 deg = 20										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	No occurrence	1/21 to 1/9: 353 days	3/26 to 11/24: 243 days										
70 percent *	No occurrence	12/30 to 1/31: 397 days	3/17 to 12/3: 261 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.		·	·										
STATS TABLE - total													
precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1945					M4.07	MT	0.01	M0.00	M0. 37	4. 60	13. 01	12. 89	34. 95
1946	5.01	6.44	5.31	M0.50									17. 26
1947													
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1998		14.12	8.13	2.33	4.51	0.24	0.06	0.02	0.	4.	16. 57		50.
1000	F 00	10.00	0.04	0.40	0.01	0.06	0.01	0.05	28	65		•	91
1999	5.80	12.28	9.94	2.42	2.31	0.06	0.01	0.25	0. 01	1. 53	8. 32	3. 66	46. 59
2000	12.80	8.67	3.09	3.78	2.77	1.08	0.02	0.02	0.	3.	4.	2.	43.
									44	37	26	76	06
2001	3.92	4.53	2.21	3.07	0.99	1.00	0.17	0.23	0.	1.	9.	11.	39.
0000	7.50	6.05	4 75	0.00	0.70	0.00	0.07	001	41	78	54	41	26
2002	7.56	6.95	4.75	3.06	0.70	0.83	0.07	0.04	0. 19	0. 06	2. 36	22. 96	49. 53
2003	7.81	3.78	5.63	12.92	1.45	0.11	0.04	0.58	0.	0.	6.	12.	52.
								2.20	55	56	08	97	48
2004	6.71	9.07	2.59	2.07	1.14	0.07	0.11	0.70	0.	4.	1.	9.	38.
2027		6.16		6.75	4.05		2.16		63	98	71	11	89
2005	5.54	2.16	6.13	6.55	4.86	4.10	0.10	0.14	0. 17	3. 42	9. 38	13. 99	56. 54
2006	11.94	5.97	10.63	4.50	1.48	0.56	0.08	0.10	0.	0.	9.	9.	55.
2000	11.57	5.51	70.00	1.00	1.15	0.00	0.00	0.10	17	70	50	68	31
2007	2.63	13.11	3.66	3.71	0.95	0.67	0.86	0.12	1.	5.	3.	7.	43.
									03	73	23	78	48

2008	10.26	3.65	4.79	2.40	0.10	0.40	0.09	0.82	0. 18	1. 13	5. 08	10. 01	38. 91
2009	2.06	6.78	6.78	1.38	3.86	0.31	0.19	0.14	0. 63	2. 45	4. 34	5. 08	34. 00
2010	10.49	5.38	6.76	8.36	3.58	3.46	0.10	0.21	2. 00	5. 29	6. 35	12. 38	64. 36
2011	2.69	4.66	12.57	5.07	1.72	1.31	0.25	M0.05	M0. 37	5. 16	4. 64	3. 31	41. 80
2012	9.11	M2.12	12.65	5.66	1.08	2.41	0.76	0.08	0. 10	3. 55	6. 93	11. 06	55. 51
2013	2.94	2.00	3.47	2.24	1.88	0.78	0.00	0.10	4. 37	0. 05	1. 70	0. 98	20. 51
2014	2.16	7.90	8.85	1.84	1.05	0.73	Т	0.00	3. 23	5. 74	5. 11	9. 96	46. 57
2015	2.07	5.59	3.78	2.39	0.10	0.07	0.13	0.51	0. 59	1. 10	5. 30	18. 77	40. 40
2016	12.30	2.93	10.48	3.27	0.64	0.11	0.59	0.02	Т	12. 03	7. 20	8. 22	57. 79
2017	11.03	14.24	10.09	5.32	1.26	0.72	0.01	0.01	0. 73	1. 81	8. 55	2. 31	56. 08
2018	9.19	2.97	8.35	5.34	0.97	0.48	0.02	0.02	0. 32	0. 89	5. 68	5. 40	39. 63
2019	8.39	16.09	5.39	3.64	3.11	T	0.02	0.46	3. 21	2. 08	2. 05	7. 88	52. 32
2020	9.26	1.01	2.80	2.11	5.66	0.53	MT	0.02	0. 77	0. 60	3. 27	5. 14	31. 17
2021	6.81	6.15	4.29	0.67	0.33	1.93	0.11	0.01	1. 68	5. 40	3. 79	6. 73	37. 90
2022	2.92	0.41	2.18	5.08	2.64	2.73	0.60	Т	0. 52	0. 21	6. 47	10. 49	34. 25
2023	6.39	6.47	M6.74										19. 60

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2023-03-14

Appendix C

Life Plan Humboldt Aquatic Resources Delineation (Attached Separately)



Technical Memorandum

July 13, 2023

То	Ann Lindsay, LPH George Williamson, LPH	Contact No.	707.267.2224						
Copy to	Misha Schwarz, GHD Project Manager	Email	alindsay52@gmail.com; georgew@planwestpartners.com;						
From	Miles Hartnett, GHD Biologist	Project No.	12603187						
Project Name	Life Plan Humboldt (LPH) Aging in Place Life Plan Community Project								
Subject	Botanical Survey and Report Memorandum								

1. Introduction

This technical memorandum reports the results of the completed protocol-level botanical surveys on behalf of Life Plan Humboldt (LPH), in support of the Aging in Place Life Plan Community Project (Project) in McKinleyville, California. GHD conducted seasonally appropriate floristic surveys for special status plant species and Sensitive Natural Communities (SNC's) within the Project Study Boundary (PSB) on May 9th and June 13th, 2023. This technical memorandum summarizes all botanical and vegetation classification studies conducted during the survey. One special status plant species, Harlequin lotus (*Hosackia gracilis*-CRPR 4.2) and one SNC, Coastal dune willow - Sitka willow - Douglas spiraea thickets Shrubland Alliance (Sallix hookeriana - Salix sitchensis - Spiraea douglasii- S3/G4) was detected within the PSB. Vegetative SNC's were mapped in addition to wetland communities identified in the Aquatic Resources Delineation Report completed for Life Plan Humboldt on March 8, 2023.

1.1 Project Location and Setting

The Project site is located within Section 6, Township 06 North, Range 01 East, and Section 31, Township 07 North, Range 01 East, Arcata North USGS 7.5 Minute Quadrangle, in Humboldt County, California. The site is comprised of approximately 14.7 acres and includes the entirety of Assessor Parcel Numbers (APNs) 510-133-013 and 508-251-060 on Hiller Road, McKinleyville, California (Attachment A: Figure 1, Vicinity Map).

The surveys were conducted within the Project Study Boundary (PSB) as shown in **Attachment A: Figure 2**, **PSB**. The PSB consists of the two APNs and contains an open pasture and a scattered eucalyptus grove bordered by the McKinleyville shopping center and open space to the north, commercial development to the east, residential development to the south, and a church and active pastureland to the west. The property is a generally flat to gently sloped with a wet swale that dissects the site in a north westerly direction.

This Technical Memorandum is provided as an interim output under our agreement with Life Plan Humboldt. It is provided to foster discussion in relation to technical matters associated with the project and should not be relied upon in any other way.

12603187

2. Regulatory Setting

2.1 Federally Listed Species

Special status plant species under federal jurisdiction include those listed as endangered, threatened, or as candidate species by the United States Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (ESA).

2.2 State Listed and/or Special Status Species

Special status plant species under California Department of Fish and Wildlife (CDFW) jurisdiction include the following:

- Endangered, Threatened, or Candidate plant species listed under the California Endangered Species Act (CESA)
- Plants listed as Rare under California Native Plant Protection Act (FGC, § 1900 et seq.)
- Plants on the California Native Plant Society's (CNPS) California Rare Plant Rank (CRPR) Lists 1 and 2.
- Taxa which meet the criteria for listing as described in Section 15380 of the California Environmental Equality Act (CEQA). All CRPR 1 and 2 and some CRPR 3 and 4 plants may fall under Section 15380 of CEQA.
- Locally significant plants (CEQA Guidelines, § 15125, subd. (c)) as designated in local or regional plans, policies, or ordinances are also considered special status plant species (CDFW 2018).

Plant species on CRPR Lists 1 and 2 are considered eligible for state listing as endangered or threatened pursuant to the California Fish and Game Code (FGC), and CDFW has oversite of these special status plant species as a trustee agency under Section 1802 of the FGC. Such species are considered during the CEQA process because they meet the definition of threatened or endangered under Sections 2062 and 2067 of the FGC

Plant species on CRPR Lists 3 and 4 do not have formal protection under CEQA, but may merit consideration in certain circumstances including occurrences at the periphery of a species' range, areas where the taxon is especially uncommon, areas where the taxon has sustained heavy losses or is declining, occurrences exhibiting unusual morphology or occurring on unusual substrates, species maintained on BLM, USFWS, or USFS sensitive species lists, and taxa associated with a habitat that is declining in California at a significant rate (CNPS 2020).

2.3 Sensitive Natural Communities

SNC's include those that are tracked in the California Natural Diversity Database (CNDDB) as well as A Manual of California Vegetation (MCV2) alliances or associations with NatureServe State Ranks of S1 to S3. CDFW maintains a list of MCV2 alliances that must be considered during the CEQA process (CDFW 2023a). Aquatic resources (e.g. watercourses, ponds, wetlands, vernal pools, etc.) are also considered sensitive communities and are afforded special protections under CEQA and other federal, state, and local laws, regulations, and ordinances.

Sources for assessing SNC's include *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), *List of Vegetation Alliances* (CDFW 2023a), and *A Manual of California Vegetation Online Edition* (CNPS 2023b).

3. Methods

3.1 Pre-Survey Investigations

A scoping list of special status plant species and communities with recorded occurrences in the project vicinity was compiled prior to surveys on April 7, 2023 by consulting the CNDDB (CDFW 2023b), the CNPS Rare Plant Inventory (CNPS 2023a), and U.S. Fish and Wildlife Service IPaC (USFWS 2023) The CNDDB RareFind database was also consulted for rare plant occurrences documented in the project vicinity.

The scoping list includes special status plant species with documented occurrences within a nine-quad search of the PSB including the Arcata North USGS 7.5-Minute quadrangle and adjacent eight quadrangles (Trinidad, Crannell, Panther Creek, Blue Lake, Korbel, Arcata South, Eureka, and Tyee City). The query yielded 58 special status plant species with documented occurrences within the nine-quad scoping area. All special status plant species identified in the database queries described above were compiled and reviewed prior to the field survey visits and evaluated for their potential to occur within the PSB based on existing habitat availability (Table 1). Results of each database query are provided in Attachment E: Database Query Results.

Of the 58 special status species identified in the database query, 15 were determined to have a moderate to high potential to occur within the PSB based on existing habitat observed during site visits. The remaining 43 species have no or low potential to occur within the PSB because they are restricted by hydrologic conditions, soil or substrate, topographic conditions, pH conditions, geographic isolation, or associated vegetative communities that do not occur within the PSB.

Special status plant species with a moderate to high potential to occur within the PSB include the following 15 species: Bolander's reed grass (*Calamagrostis bolanderi*), bristle-stalked sedge (*Carex leptalea*), northern meadow sedge (*Carex praticola*), Oregon goldthread (*Coptis laciniata*), giant fawn lily (*Erythronium oregonum*), harlequin lotus (*Hosackia gracilis*), western lily (*Lilium occidentale*), leafy-stemmed miterwort (*Mitellastra caulescens*), Howell's montia (*Montia howellii*), nodding semaphore grass (*Pleuropogon refractus*), maple-leaved checkerbloom (*Sidalcea malachroides*), Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula*), coast checkerbloom (*Sidalcea oregana ssp. eximia*), Scouler's catchfly(*Silene scouleri ssp. scouleri*), and cylindrical trichodon (*Trichodon cylindricus*).

Table 1 below details all 58 special status plant species identified in the database scoping and query results described above as well as a discussion of the potential for each species to occur within the PSB based on the existing habitat present.

Table 1. Potential for Special Status Plants to Occur within the PSB

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Abronia umbellate var. breviflora	Pink sand-verbena	None	None		S2	1B.1	Coastal dunes	No potential. The PSB does not contain suitable habitat for this species.
Angelica lucida	sea-watch	None	None	G5	S3	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt).	No potential. The PSB does not contain suitable habitat for this species.
Astragalus pycnostachyus var. pycnostachyus	Coastal marsh milk vetch	None	None	G2T2	S2	1B.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	No potential. The PSB does not contain suitable habitat for this species. Wetland meadow habitat is freshwater wetland.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	G4T4	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	No potential. The PSB does not contain suitable habitat for this species
Calamagrostis bolanderi	Bolander's reed grass	None	None	G4	S4	4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Cardamine angulata	seaside bittercress	None	None	G4G5	S3	2B.2	Lower montane coniferous forest, North Coast coniferous forest	No potential. The PSB does not contain suitable habitat for this species
Carex arcta	Northern clustered sedge	None	None	G5	S1	2B.2	Bogs and fens, North Coast coniferous forest (mesic)	Low potential . The PSB contains only marginally suitable habitat for this species and is outside of its known elevation range.

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Carex leptalea	bristle-stalked sedge	None	None	G5	S1	2B.2	Bogs and fens, Marshes and swamps, Meadows and seeps	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Carex lyngbyei	Lyngbye's sedge	None	None	G5	S3	2B.2	Marshes and swamps (brackish)	No potential . The PSB does not contain suitable habitat for this species.
Carex praticola	northern meadow sedge	None	None	G5	S2	2B.2	Meadows and seeps	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	None	None	G4T2	S2	1B.2	Marshes and swamps (coastal salt)	No potential . The PSB does not contain suitable habitat for this species.
Castilleja litoralis	Oregon coast paintbrush	None	None	G3	S3	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	No potential. The PSB does not contain suitable habitat for this species.
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	None	None	G4?T2	S2	1B.2	Marshes and swamps (coastal salt)	No potential. The PSB does not contain suitable habitat for this species.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	G5?	S3	4.3	North Coast coniferous forest, Riparian forest	No potential . The PSB does not contain suitable habitat for this species.
Collinsia corymbosa	round-headed collinsia	None	None	G1	S1	1B.2	Coastal dunes	No potential. The PSB does not contain suitable habitat for this species.
Coptis laciniata	Oregon goldthread	None	None	G4?	S3?	4.2	Meadows and seeps, North Coast coniferous forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Eleocharis parvula	small spikerush	None	None	G5	S3	4.3	Marshes and swamps	No potential . The PSB does not contain suitable habitat (i.e. coastal salt marsh) for this species.
Epilobium septentrionale	Humboldt County fuchsia	None	None	G4	S4	4.3	Broadleafed upland forest, North Coast coniferous forest	No potential. The PSB does not contain suitable habitat for this species.
Erysimum menziesii	Menzies' wallflower	FE	CE	G1	S1	1B.1	Coastal dunes	No potential. The PSB does not contain suitable habitat for this species.

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Erythronium oregonum	giant fawn lily	None	None	G5	S2	2B.2	Cismontane woodland, Meadows and seeps	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Erythronium revolutum	coast fawn lily	None	None	G4G5	S3	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Low potential . The PSB contains only marginally suitable habitat for this species.
Fissidens pauperculus	minute pocket moss	None	None	G3?	S2	1B.2	North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Fritillaria purdyi	Purdy's fritillary	None	None	G4	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	No potential. The PSB does not contain suitable habitat for this species.
Gilia capitata ssp. pacifica	Pacific gilia	None	None	G5T3	S2	1B.2	Chaparral, Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Low potential . The PSB contains only marginally suitable habitat for this species.
Gilia millefoliata	dark-eyed gilia	None	None	G2	S2	1B.2	Coastal dunes	No potential. The PSB does not contain suitable habitat for this species.
Glehnia littoralis ssp. leiocarpa	American glehnia	None	None	G5T5	S2S3	4.2	Coastal dunes	No potential. The PSB does not contain suitable habitat for this species.
Hemizonia congesta ssp. tracyi	Tracy's tarplant	None	None	G5T4	S4	4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	Low potential . The PSB contains only marginally suitable habitat for this species.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	G4T3	S3	1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie	Low potential . The PSB contains only marginally suitable habitat for this species.
Hosackia gracilis	harlequin lotus	None	None	G3G4	S3	4.2	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal	Present. Species was observed within the PSB on June 13 th , 2023.

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
							scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	
Iliamna latibracteata	California globe mallow	None	None	G2G3	S2	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	No potential. The PSB does not contain suitable habitat for this species.
Lasthenia californica ssp. macrantha	perennial goldfields	None	None	G3T2	\$2	1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	No potential . The PSB does not contain suitable habitat for this species.
Lathyrus glandulosus	sticky pea	None	None	G3	S3	4.3	Cismontane woodland	No potential . The PSB does not contain suitable habitat for this species.
Lathyrus japonicus	seaside pea	None	None	G5	S2	2B.1	Coastal dunes	No potential . The PSB does not contain suitable habitat for this species.
Lathyrus palustris	marsh pea	None	None	G5	S2	2B.2	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	Low potential. The PSB contains only marginally suitable habitat for this species.
Layia carnosa	beach layia	FE	CE	G2	S2	1B.1	Coastal dunes, Coastal scrub	No potential . The PSB does not contain suitable habitat for this species.
Lilium kelloggii	Kellogg's lily	None	None	G3	S3	4.3	Lower montane coniferous forest, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Lilium occidentale	western lily	FE	CE	G1	S1	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes	Moderate potential. The PSB contains wet pasture and meadow habitat that may be suitable for this species. The closest recent occurrences (< 20 years) are

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
							and swamps, North Coast coniferous forest	located at the Table Bluff Ecological Reserve in the Fields Landing quad.
Listera cordata	heart-leaved twayblade	None	None	G5	S4	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	Low potential . The PSB contains only marginally suitable habitat for this species.
Lycopodium clavatum	running pine	None	None	G5	S3	4.1	Lower montane coniferous forest (mesic) Marshes and swamps North Coast coniferous forest (mesic)	Low potential. The PSB contains only marginally suitable habitat for this species.
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Monotropa uniflora	ghost-pipe	None	None	G5	S2	2B.2	Broadleafed upland forest, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Montia howellii	Howell's montia	None	None	G3G4	S2	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Oenothera wolfii	Wolf's evening- primrose	None	None	G2	S1	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	Low potential . The PSB contains only marginally suitable habitat for this species.
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	G4T4	S2S3	2B.2	Coastal scrub, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Piperia candida	white-flowered rein orchid	None	None	G3	S3	1B.2	Broadleafed upland forest, Lower montane coniferous	No potential . The PSB does not contain suitable habitat for this species.

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
							forest, North Coast coniferous forest	
Pityopus californicus	California pinefoot	None	None	G4G5	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	No potential. The PSB does not contain suitable habitat for this species.
Pleuropogon refractus	nodding semaphore grass	None	None	G4	S4	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Ribes laxiflorum	trailing black currant	None	None	G5?	S3	4.3	North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Sidalcea malachroides	maple-leaved checkerbloom	None	None	G3	S3	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Moderate potential. The PSB contains some habitat that may be suitable for this species.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	G5T2	S2	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Moderate potential. The PSB contains some habitat that may be suitable for this species
Sidalcea oregana ssp. eximia	coast checkerbloom	None	None	G5T1	S1	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Silene scouleri ssp. scouleri	Scouler's catchfly	None	None	G5T4T5	S2S3	2B.2	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland	Moderate potential. The PSB contains some habitat that may be suitable for this species

Scientific Name	Common Name	FESA	CESA	Global Rank ²	State Rank ²	CRPR ²	Habitat Requirements ¹	Potential to Occur in the PSB
Spergularia canadensis var. occidentalis	western sand- spurrey	None	None	G5T4	S1	2B.1	Marshes and swamps (coastal salt)	No potential . The PSB does not contain suitable habitat (i.e. coastal salt marsh) for this species.
Sulcaria spiralifera	twisted horsehair lichen	None	None	G3G4	S2	1B.2	Coastal dunes, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Tiarella trifoliata var. trifoliata	trifoliate laceflower	None	None	G5T5	S2S3	3.2	Lower montane coniferous forest, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Trichodon cylindricus	cylindrical trichodon	None	None	G4G5	S2	2B.2	Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest	Moderate potential. Wetland meadow habitat is present in the PSB and may contain suitable habitat for this species.
Usnea longissima	Methuselah's beard lichen	None	None	G4	S4	4.2	Broadleafed upland forest, North Coast coniferous forest	No potential . The PSB does not contain suitable habitat for this species.
Viola palustris	alpine marsh violet	None	None	G5	S1S2	2B.2	Bogs and fens, Coastal scrub	Low potential . The PSB contains only marginally suitable habitat for this species.

Footnotes:

- 1 General habitat, and microhabitat column information, reprinted from CNDDB (April 7, 2023).
- 2 Rankings from CNDDB (April 7, 2023

Column Header Categories and Abbreviations:

FESA Listing status under the federal Endangered Species Act (ESA)

FE Federal Endangered: FT = Federal Threatened: FC = Federal Candidate: FD = Federally Delisted

CESA Listing status under the California state Endangered Species Act (CESA)

SE State Endangered; SD = State Delisted; ST = State Threatened.

G-Rank: Global Rank from NatureServe's Heritage Methodology (NatureServe 2021) (ranking according to degree of global imperilment - G1 = Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors; G2 = Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors; G3 = Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors; G4 = Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors; G5 = Secure—Common; widespread and abundant.

Subspecies/variety level: "Subspecies/varieties receive a T-rank attached to the G-rank. With the subspecies/varieties, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety" (CDFW 2021b); ? = "Denotes inexact numeric rank" (NatureServe 2021); Q = "Questionable taxonomy that may reduce conservation priority" (NatureServe 2021)

S-Rank: State Rank from NatureServe's Heritage Methodology (NatureServe 2021) (ranking according to degree of imperilment in the state (California) - S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state; S2 = Imperiled—Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state; S3 = Vulnerable—Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state; S4 = Apparently Secure—Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors; S5 = Secure—Common, widespread, and abundant in the state; SNR = State Not Ranked.

CRPR: California Rare Plant Ratings (CNPS 2023a) - 1A = Plants presumed extinct in California; 1B = Plants rare, threatened or endangered in California and elsewhere; 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; 3 = Plants about which more information is needed (a review list); 4 = Plants of limited distribution (a watch list); n/a = not applicable; Threat Code extensions and their meanings: ".1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 – Moderately threatened in California (20-80% of occurrences threatened / low degree and immediacy of threat or no current threats known)"

Potential to Occur:

No potential: Habitat in and adjacent to the PSB is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Low potential: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found in the PSB.

Moderate potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found in the PSB.

High potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on in the PSB

Present: Detected or documented on-site.

3.2 Floristic Surveys

GHD wildlife biologist/botanist, Miles Hartnett, conducted floristic surveys on May 9th, 2023 and June 13th, 2023 during the appropriate blooming period for each special status plant species with moderate or high potential to occur within the PSB as determined above in **Table 1**. The special status plant survey followed *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018) and *General Rare Plant Survey Guidelines by the Endangered Species Recovery Program* (USFWS 2002). The special status plant survey was conducted by walking the site and identifying all plant species encountered to the lowest taxonomic level necessary for rare plant identification. Nomenclature follows The *Jepson Manual, Second Edition* (Baldwin et al 2012).

Miles Hartnett has nine years of professional experience in wildlife biology, forestry, botany, and environmental compliance and received a Bachelor of Science degree in Environmental Science and Ecological Restoration form Humboldt State University in 2011 with multiple studies pertaining to plant taxonomy, biology, ecology, soils, wetland soils, and watershed management. Mr. Hartnett holds a Rare Plant Voucher Collecting Permit (No. 2081 a-20-090-V).

A complete list of all species observed within the project area is provided in **Attachment B: List of Observed Taxa**. Observed SNCs were recording using the *Combined Vegetation Rapid Assessment and Releve Filed Form* provided in Attachment D.

4. Results

4.1 Special Status Plants

This study constitutes a seasonally appropriate botanical survey for this project. A total of 87 plant species were observed within the PSB during all site visits. A complete list of all plant species observed is included in **Attachment B: List of Observed Taxa**.

One special status plant species was observed within the PSB during the survey site visits and is detailed below:

1). Harlequin lotus (Hosackia gracilis Benth) (Attachment C: Photos 1-2)

Conservation Status:

- CA Rare Plant Rank of 4.2 (Watch List/Limited Distribution; fairly threatened in California).
- Global Rank: G3G4 (Vulnerable to Apparently Secure)
- State Rank: S3 (Vulnerable)

A population of approximately 1,000 individuals of *H. gracilis* was identified throughout the PSB on June 13, 2023. Prior to this occurrence, there have been no other occurrences of *H. gracilis* documented on the CNDDB or Rare Plant Inventory within the Arcata North USGS 7.5-Minute quadrangle. *H. gracilis* individuals observed were primarily associated with non-native pasture grasses such as *Anthoxanthum odoratum, Holcus lanatus,* and *Agrostis stolonifera*, and were integrating closing with *Lotus ulginosus*. The occurrences were located in open pasture areas between GPS coordinates (40.941981, -124.105896) and (40.940997, -124.104844) at an elevation of approximately 135 feet above sea level (**Attachment A: Figure 3, Special Status Plant Species).**

H. gracilis is a perennial rhizomatous herb in the Fabaceae family and associates with many general habitat types including broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, north

coast coniferous forest, and valley and foothill grassland. General micro habitats include wetlands and roadsides. Threats to this species include development, grazing, feral pigs, habitat alteration, and competition (CNPS 2023a).

4.2 Sensitive Natural Communities

Natural communities within the PSB were classified according to *A Manual of California Vegetation Online Edition* (Sawyer et. al. 2019). SNC's include those that are listed in CNDDB as well as observed alliances or associations with NatureServe State Rarity Ranks of S1 to S3 and are listed on CDFW's *List of California Sensitive Natural Communities* (CDFW 2023a). Observed SNC's were recorded in the field using the *Combined Vegetation Rapid Assessment and Releve Field Form* provided in **Attachment D: Rapid Assessment Datasheets**.

Aquatic resources including wetlands are also classified as sensitive communities. Aquatic resources identified within the PSB during the Aquatic Resources Delineation completed for Life Plan Humboldt on March 8, 2023 are included with SNC's for the purposes of this this report. Please see the Aquatic Resources Delineation Report for Life Plan Humboldt for details, maps, and datasheets regarding wetland communities identified within the PSB (GHD 2023).

Non-sensitive vegetative communities observed within the PSB include common velvet grass-sweet vernal grass meadows (*Anthoxanthum odoratum - Holcus lanatus*) Herbaceous Semi-Natural Alliance, Kentucky bluegrass - Redtop – Creeping bentgrass meadows (*Poa pratensis - Agrostis gigantea - Agrostis stolonifera*) Herbaceous Semi-Natural Alliance, and Eucalyptus groves (*Eucalyptus spp.*) Woodland Semi-Natural Alliance.

One SNC was observed within the PSB in addition to previously delineated wetlands and is detailed below:

1). <u>Coastal dune willow- Sitka willow - Douglas spiraea</u> (*Salix hookeriana - Salix sitchensis - Spiraea* douglasii) Shrubland Alliance **Attachment C: Photos 3-4**):

Conservation Status:

• Global Rank: G3 (Vulnerable)

• State Rank: S3 (Vulnerable)

One discontinuous community of Coastal dune willow- Sitka willow – Douglas spiraea (*Salix hookeriana - Salix sitchensis - Spiraea* douglasii) Shrubland Alliance comprising approximately 3,025 sqft within the PSB was identified on May 9th, 2023. The occurrences were located primarily along the outer edges of wetland communities between GPS coordinates (40.942177, -124.104115) and (40.941778, -124.106008) at an elevation of approximately 135 feet above sea level (**Appendix A: Figure 4, Wetlands and Sensitive Natural Communities).**

Salix hookeriana and Salix sitchensis alliances were treated as separate alliances in A Manual of California Vegetation, Second Edition (2009), however, they have since been merged into a combined alliance in A Manual of California Vegetation, Online Edition (2023). Salix sitchensis and S. hookeriana are typical dominants or co-dominants in this alliance and stands range from Alaska to California. They grow along low elevation streams and lagoons along the North Coast of California. Stands commonly occur in road banks and along shores of creeks, rivers, lagoons, and dune hollows. It is the major willow scrub along the moist, northwestern coastal belt of California (CNPS 2023b).

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5. Conclusion

Seasonally appropriate floristic surveys for special status plants and SNCs with potential to occur within the PSB were conducted by GHD on May 9th and June 13th, 2023. One special-status plant species, Harlequin lotus (*Hosackia gracilis*-CRPR 4.2) and one SNC, Coastal dune willow- Sitka willow – Douglas spiraea (*Salix hookeriana - Salix sitchensis - Spiraea* douglasii) Shrubland Alliance (G3/S3) were observed throughout the PSB.

6. References

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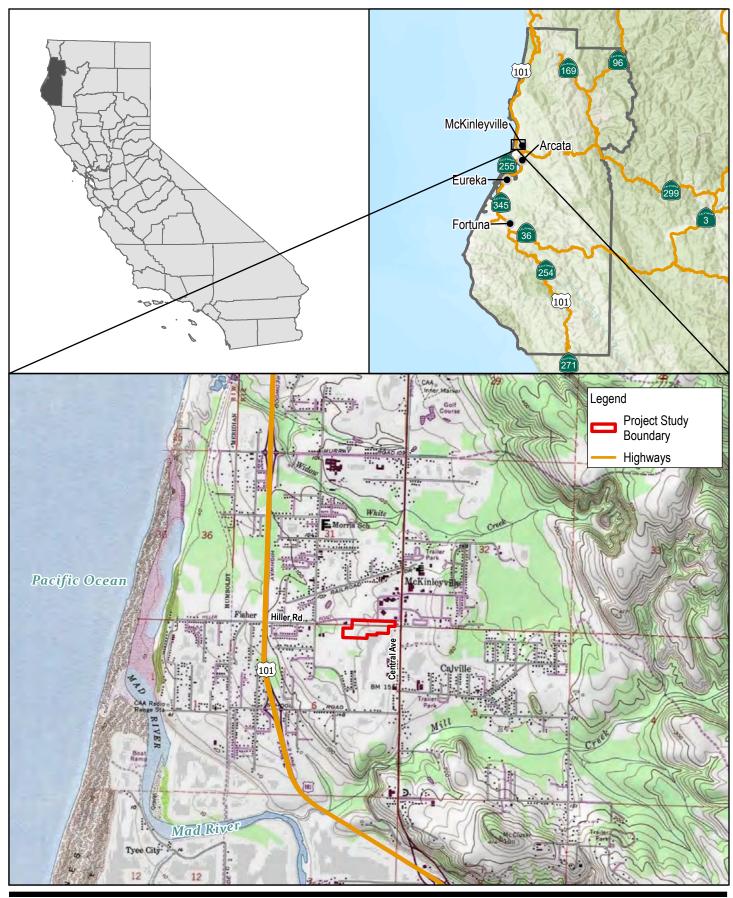
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Attachment A

Figures





Map Projection: Mercator Auxiliary Sphere Horizontal Datum: WGS 1984 Grid: WGS 1984 Web Mercator Auxiliary Sphere



Life Plan Humboldt Wetland Delineation South Hiller Rd, McKinleyville

Project No. 12603187 Revision No. -

Date **Jul 2023**





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



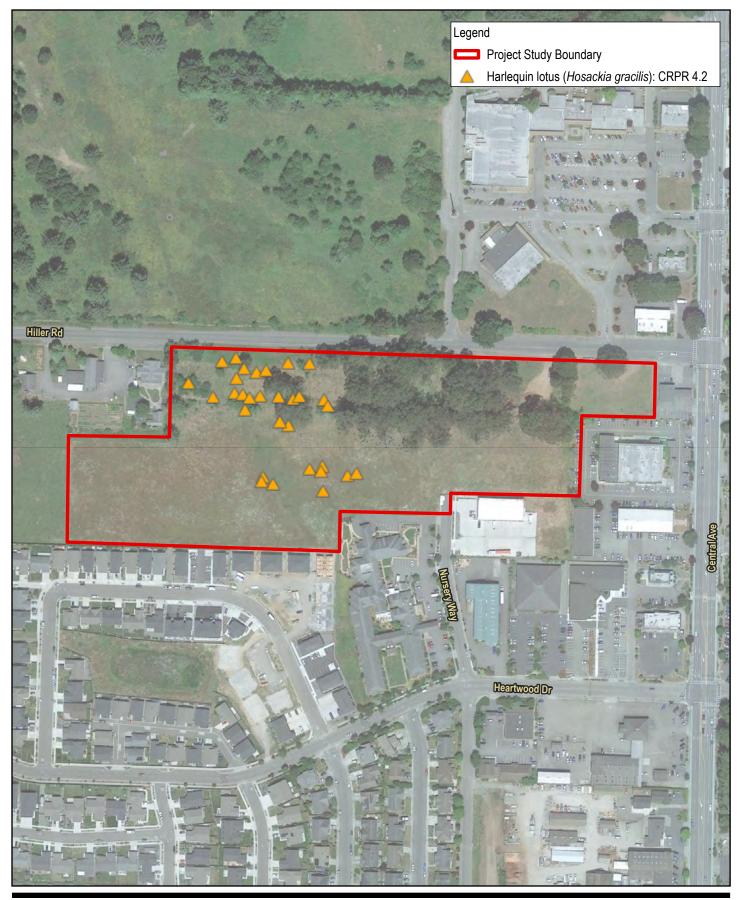


Life Plan Humboldt
Rare Plants and Sensitive Natural Communities Survey
McKinleyville

Project Study Boundary (PSB)

Project No. 12603187 Revision No. -

Date **Jun 2023**





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





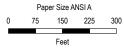
Life Plan Humboldt
Rare Plants and Sensitive Natural Communities Survey
McKinleyville

Project No. 12603187 Revision No. -

Date **Jun 2023**

Special Status Species





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



GHD

Life Plan Humboldt Rare Plants and Sensitive Natural Communities Survey McKinleyville

Wetlands and Sensitive Natural Communities (SNC)

Project No. 12603187 Revision No. -Date Jul 2023

Attachment B

List of Observed Taxa

Attachment B. Plant species observed in the PSB 2022.

Scientific Name	Common Name	Family	Status		
Abies grandis	grand fir	Pinaceae	native		
Acmispon parvula	hill lotus	Fabacea	native		
Agrostis stolonifera	redtop	Poaceae	invasive non-native		
Alnus rubra	red alder	Betulaceae	native		
Anthoxanthum odoratum	sweet vernal grass	Poaceae	invasive non-native		
Avena barbata	slim oat	Poaceae	non-native		
Baccharis pilularis	coyote brush	Asteraceae	non-native		
Bellis perennis	English daisy	Asteraceae	non-native		
Brassica nigra	black mustard	Brassicaceae	invasive non-native		
Briza maxima	rattlesnake grass	Poaceae	non-native		
Bromus carinatus	California brome	Poaceae	native		
Bromus diandrus	ripgut	Poaceae	non-native		
Bromus hordeaceus	soft chess	Poaceae	invasive non-native		
Carex hartfordii	Montery sedge	Cyperaceae	native		
Carex obnupta	slough sedge	Cyperaceae	native		
Cerastrium fontanum	common chickweed	Caryophyllaceae	non-native		
Cerastrium glomeratum	sticky chickweed	Caryophyllaceae	non-native		
Cirsium vulgare	bullthistle	Asteraceae	invasive non-native		
Claytonia sibirica	candy flower	Montiaceae	native		
Cortaderia sp.	pampas grass	Poaceae	invasive non-native		
Crocsosmia x crocosmiiflora	monbretia	Iridaceae	invasive non-native		
Cytisus scoparius	Scotch broom	Fabaceae	invasive non-native		
Dactylus glomeratus	orchard grass	Poaceae	non-native		
Daucus carota	carrot	Apiaceae	non-native		
Daucus pusillus	wild carrot	Apiaceae	native		
Epilobium ciliatum	Northern willow herb	Onagraceae	native		
Equisetum arvense	common horsetail	Equisetaceae	native		
Erigeron canadensis	horseweed	Asteraceae	native		
Erodium moschatum	whitestem filaree	Geraniaceae	non-native		
Eucalyptus globulus	blue gum	Myrtaceae	invasive non-native		
Festuca arundinacea	reed fescue	Poaceae	invasive non-native		
Festuca perennis	Italian rye grass	Poaceae	invasive non-native		
Fragaria vesca	wild strawberry	Rosaceae	native		
Gallium aparine	cleavers	Rubiaceae	non-native		
Gaultheria shallon	salal	Ericaceae	native		
Geranium dissectum	cutleaf geranium	Geraniaceae	non-native		
Geranium molle	dove's foot geranium	Geraniaceae	non-native		
Gernanium robertianum	Rpobert geranium	Geraniaceae	non-native		

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Scientific Name	Common Name	Family	Status		
Holcus lanatus	common velvetgrass	Poaceae	invasive non-native		
Hosackia gracilis	harlequin lotus	Fabacea	native (CRPR 4.2)		
Hypochaeris glabra	smooth cats ear	Asteraceae	invasive non-native		
Hypochaeris radicata	hairy cats ear	Asteraceae	invasive non-native		
llex aquifolium	holly	Aquifoliaceae	invasive non-native		
Juncus effusus var. pacifica	Pacific rush	Juncaceae	native		
Juncus hesperius	coast rush	Juncaceae	native		
Lactuca saligna	willow lettuce	Asteraceae	non-native		
Lapsana communis	nipplewort	Asteraceae	non-native		
Leucanthemum vulgare	oxe eye daisy	Asteraceae	invasive non-native		
Linum bienne	flax	Linaceae	non-native		
Lonicera involucrata	coast twinberry	Caprifoliaceae	native		
Lotus corniculatus	bird's foot trefoil	Fabaceae	non-native		
Lotus ulginosus	marsh lotus	Fabaceae	non-native		
Lupinus rivularis	riverbank lupine	Fabaceae	native		
Medicago polymorpha	burclover	Fabaceae	invasive non-native		
Narcissus spp.	daffodil	Amaryllidaceae	non-native		
Oenanthe sarmentosa	water parsley	Apiaceae	non-native		
Oxalis articulata	windowbox woodsorrel	Oxalidaceae	non-native		
Oxalis pes-caprae	Burmuda buttercup	Oxalidaceae	invasive non-native		
Picea sitchensis	Sitka spruce	Pinaceae	native		
Pinus radiata	Montery pine	Pinaceae	invasive non-native		
Plantago lanceolata	ribwort	Plantaginaceae	invasive non-native		
Poa annua	annual blue grass	Poaceae	non-native		
Polystichum munitum	Western sword fern	Dryopteridaceae	native		
Pseudotsuga menziesii	Douglas-fir	Pinaceae	native		
Pteridium aquilinum	bracken fern	Dennstaedtiaceae	native		
Ranunculus repens	creeping buttercup	Ranunculaceae	invasive non-native		
Raphanus sativus	wild radish	Brassicaceae	non-native		
Rubus armeniacus	Himalayan blackberry	Rosaceae	invasive non-native		
Rubus parviflorus	thimbleberry	Rosaceae	native		
Rubus ursinus	California blackberry	Rosaceae	native		
Rumex acetosella	sheep sorrel	Polygonaceae	invasive non-native		
Rumex crispus	curley dock	Polygonaceae	invasive non-native		
Salix hookeriana	coastal willow	Salicaceae	native		
Salix sitchensis	Sitka willow	Salicaceae	native		
Sambucus racemosa	red elderberry	Viburnaceae	native		
Scrophularia californica	·		native		
Sonchus asper	prickly sow thistle	Asteraceae	non-native		

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Scientific Name	Common Name	Family	Status		
Stachys chamissonis	hedge nettle	Lamiaceae	native		
Taraxacum officinale	common dandelion	Asteraceae	non-native		
Trifoliem pratensis	red clover	Fabacea	non-native		
Trifolium dubium	lesser trefoil	Fabaceae	non-native		
Trifolium repens	white clover	Fabaceae	non-native		
Tropaeolum majus	garden nasturtium	Tropaeolaceae	non-native		
Vaccinium ovatum	evergreen huckleberry	Ericaceae	native		
Veronica anagallis-aquatica	water speedwell	Plantaginaceae	non-native		
Vicia americana	American vetch	Fabacea	native		
Vicia sativa	a sativa spring vetch		non-native		

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Attachment C

Site Photographs

Photo 1:

Description:

Harlequin lotus
(Hosackia gracilis-

CRPR 4.2).

Approximately 1,000 individuals observed throughout the PSB.

Location:

40.941963,-124.105344

Date:

June 13, 2023



Photo 2:

Description:

Harlequin lotus (Hosackia gracilis-CRPR 4.2) community associated with nonnative A. odoratum and H. lanatus, Integrating closely with non-native L. ulginosus.

Location:

40.941691,-124.105763

Date:

June 13, 2023



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Photo 3:

Description:

Coastal dune willow-Sitka willow – Douglas spiraea (Salix hookeriana -Salix sitchensis -Spiraea douglasii) Shrubland Alliance comprising approximately 3,025 sqft within the PSB.

Location:

40.941907,-124.106137

Date:

May 09, 2023



Photo 4:

Description:

Coastal dune willowSitka willow –
Douglas spiraea
(Salix hookeriana Salix sitchensis Spiraea douglasii)
Shrubland Alliance
comprising
approximately 3,025
sqft within the PSB.

Location:

40.941878,-124.106091

Date:

May 09, 2023



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Attachment D

Rapid Assessment Datasheets

549/2023 MA

Combined Vegetation Rapid Assessment and Relevé Field Form (Revised March 27, 2018) SPECIES SHEET

Database #: ___

IV. VE	GETATION DES	CRIPTION									
% NonVasc cover: Total % Vasc Veg cover:											
% Cove	r - Conifer tre	ee / Hardwood tree: C / +#	Rege	enerating Tree: 5 Shrub: >> Herbaceous:							
	Height Class - Conifer tree / Hardwood tree: Regenerating Tree: 3 Shrub: 5 Herbaceous:										
	Height classes: 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-5m, 5=5-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10=>50m										
Stratum categories: T=Trce, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular											
	% Cover Interv	vals for reference: $r = trace$, $+ = -$	<1%, 1-5	5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%							
Stratum	Species		% cover	C Final species determination							
9	SAL HED	Solixhopeorin	75								
14	RANKER	Pramahs feets	1-5								
Н	JUVEFF	Janus 1 Frans	+								
5	Ruburs	hubus usinus	5-15								
I	HOLLAN	Holcus lanatus	1-5								
1	AUTODO	/									
H		Homenthun dorate	+								
-	RUM.LI	huner Csiques	1-5								
H H	GALAPA	Colina Aparile	-								
	MENDL	Medican proymophs	+								
H	EKOKIO	Endin moshitin									
_ H	OEVSAR	Obserthe samuelosa	7								
_											
	-	<u> </u>									
	+										
Unusual	Unusual species:										

Combined Vegetation Rapid Assessment and Relevé Field Form (Revised March 27, 2018)

Decimal degrees: LAT 4 0 . 0 4 GPS within stand? Yes / No If No, and record: Base point ID	Name of recorder: Males Manual - GHD
UID: GPS name: FOS Action (a) UTME UTMI Decimal degrees: LAT 4 0 . 0 4 GPS within stand? Yes / No If No, and record: Base point ID	Other surveyors: Location Name: H. (12) M. (2n) CA For Relevé only: Bearing°, lest axis at ID point of Long / Short sid Zone: 11 NAD83 GPS error: ft./ m./ PDOP
UID: GPS name: FOS ACTOWN (20) UTME UTMI Decimal degrees: LAT 4 0 . 9 4 GPS within stand? Yes / No If No, and record: Base point ID	For Relevé only: Bearing°, lest axis at ID point of Long / Short sid
UTME UTMI Decimal degrees: LAT 4 0 . 0 4 GPS within stand? Yes / No If No, and record: Base point ID	For Relevé only: Bearing°, left axis at ID point of Long / Short sid
Decimal degrees: LAT 4 0 . 0 4 GPS within stand? Yes / No If No, and record: Base point ID	N Zone: 11 NAD83 GPS error: ft./ m./ PDOP
GPS within stand? Yes / No If No, and record: Base point ID	
GPS within stand? Yes / No If No, and record: Base point ID	
and record: Base point ID	
and record: Base point ID	cite from GPS to stand: distance (m) bearing o inclination o
	Projected UTMs: UTME UTMN
Camera Name: Sa man Golan Cardinal pl Other photos:	A photo, Worth bear from 40,94193260, -124, 106/ 685
	t Area (m²): 100 / Plot Dimensions x m RA Radius 3 m
Exposure, Actual ": NE NW S	E SW Flat Variable Steepness, Actual °: 1-36 0° >5-25° >25
Fopography: Macro: top upper (Geology code: MSF Soil Textu	nid lower bottom Micro: convex Mat concave undulating re code: Low Upland or Wetland/Riparian (circle one)
% Surface cover: (Inc	Louterops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud) edrock: O Boulder: O Stone: O Cobble: O Gravel: Fines: 90 =100%
	st bioturbation present? (Ves / No % Hoof punch Decc
	s, describe in Site history section, including date of fire, if known.
- Som of stand gro - Site has been ac- - Patchy, small-	pasture wetland. (Juneus estes us, Holuslantus, Rancoulus, etc.) unin an old species pele fixely manged for pasture land unpproximately 3000005+ total
Disturbance code / Intensity (L,M,H): <i>O</i>	41 L 051 H 19 1M 1 1 "Other"
II. HABITAT DESCRIPTION	
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young therbaceous: <u>H1</u> (<12" plant ht.), <u>H2</u> (>12" ht	ht.), 2 (2-10ft, ht.), 3 (10-20ft, ht.), 4 (>20ft. ht.)
Field-assessed vagatation Alliance nemo-	Salve lantosina Saliventel er-Suison handrell
Field-assessed Association Amance name:	
Adjacent Alliances/direction: Holeus	landers - Anthorasthan adoratum Hebrains Allines (411)
Confidence in Alliance identification: L	M (H) Explain: Mets nevership rules
	Tree Other identification or mapping information:
Desert Palm/Joshua Tree: 1 (<1.5" base di III. INTERPRETATION OF STAND Field-assessed vegetation Alliance name:	Salix hostorina - Salix goldens - Suires dour lusti

Attachment E

Database Query Results

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location





Local office

Arcata Fish And Wildlife Office

(707) 822-7201

(707) 822-8411

1655 Heindon Road

NOT FOR CONSULTATION

Arcata, CA 95521-4573

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Pacific Marten, Coastal Distinct Population Segment

Threatened

Martes caurina

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/9081

Birds

NAME

Marbled Murrelet Brachyramphus marmoratus

Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/4467

Northern Spotted Owl Strix occidentalis caurina

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/1123

Western Snowy Plover Charadrius nivosus nivosus

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8035

Threatened

Yellow-billed Cuckoo Coccyzus americanus

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/3911

Threatened

Reptiles

NAME STATUS

Green Sea Turtle Chelonia mydas

Threatened

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/6199

Fishes

NAME STATUS

Tidewater Goby Eucyclogobius newberryi

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/57

Insects

NAME STATUS

Monarch Butterfly Danaus plexippus

Candidate

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9743

Flowering Plants

NAME STATUS

Western Lily Lilium occidentale

Endangered

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/998

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds
 https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds
 https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME BREEDING SEASON

Allen's Hummingbird Selasphorus sasin

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9637

Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Jan 1 to Sep 30

Black Oystercatcher Haematopus bachmani

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591

Breeds Apr 15 to Oct 31

Black Swift Cypseloides niger

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878

Breeds Jun 15 to Sep 10

Black Turnstone Arenaria melanocephala

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

California Gull Larus californicus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 1 to Jul 31

Cassin's Auklet Ptychoramphus aleuticus

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6967

Breeds Mar 21 to Sep 21

Clark's Grebe Aechmophorus clarkii

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Evening Grosbeak Coccothraustes vespertinus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 15 to Aug 10

Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1680

Breeds elsewhere

Breeds Jan 1 to Aug 31

Lesser Yellowlegs Tringa flavipes

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/9679

Marbled Godwit Limosa fedoa

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481

Olive-sided Flycatcher Contopus cooperi

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914

Rufous Hummingbird selasphorus rufus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480

Western Grebe aechmophorus occidentalis

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Breeds May 20 to Aug 31

Breeds Apr 15 to Jul 15

Breeds Jun 1 to Aug 10

Breeds Jun 1 to Aug 31

Breeds elsewhere

Wrentit Chamaea fasciata

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (1)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey, banding, and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the <u>RAIL Tool</u> and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands):
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.</u>

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the <u>NWI map</u> to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

			AAABA01010		None Status	SSC Status	CA_Rare_Plant_Rank	4112411	CRANNELL		Taxonomic_So Animals -
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABAU1U1U	None	None	SSC	-	4112411	CRANNELL	Mapped and Unprocessed	Animais - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4112318	PANTHER CREEK	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Amphibians - Ascaphidae - Ascaphus truei
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112318	PANTHER CREEK	Mapped and Unprocessed	Animals - Amphibians - Plethodontidae Plethodon elongatus
Animals - Amphibians	Plethodon elongatus	Del Norte salamander	AAAAD12050	None	None	WL	-	4112411	CRANNELL	Unprocessed	Animals - Amphibians - Plethodontidae Plethodon elongatus
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4112318	PANTHER CREEK	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012482	TYEE CITY	Mapped	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana aurora	northern red- legged frog	AAABH01021	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana boylii pop. 1	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii pop. 1
unimals - umphibians	Rana boylii pop.	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1
unimals - umphibians	Rana boylii pop.	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphibians	Rana boylii pop.	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphibians	Rana boylii pop.	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4112318	PANTHER CREEK	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1
Animals - Amphibians	Rana boylii pop. 1	foothill yellow- legged frog - north coast DPS	AAABH01051	None	None	SSC	-	4112411	CRANNELL	Mapped	Animals - Amphibians - Ranidae - Rana boylii pop. 1

10/20, 12.00	J 1 1VI					D1000 1	Title Table				
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4112318	PANTHER CREEK	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Birds	Accipiter cooperii	Coopers hawk	ABNKC12040	None	None	WL	-	4012378	KORBEL	Mapped	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Coopers hawk	ABNKC12040	None	None	WL	-	4012471	ARCATA SOUTH	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Coopers hawk	ABNKC12040	None	None	WL	-	4012472	EUREKA	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter cooperii	Coopers hawk	ABNKC12040	None	None	WL	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Accipiter striatus	sharp-shinned hawk	ABNKC12020	None	None	WL	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Accipitridae - Accipiter striatus
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	4012471	ARCATA SOUTH	Unprocessed	Animals - Birds - Accipitridae - Circus hudsonius
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	4012471	ARCATA SOUTH	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	4012472	EUREKA	Mapped	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus Ieucocephalus
Animals - Birds	Haliaeetus leucocephalus	bald eagle	ABNKC10010	Delisted	Endangered	FP	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Birds - Accipitridae - Haliaeetus Ieucocephalus
Animals - Birds	Brachyramphus marmoratus	marbled murrelet	ABNNN06010	Threatened	Endangered	-	-	4012472	EUREKA	Unprocessed	
Animals - Birds	Cerorhinca monocerata	rhinoceros auklet	ABNNN11010	None	None	WL	-	4112411	CRANNELL	Mapped	Animals - Birds - Alcidae - Cerorhinca
Animals - Birds	Fratercula cirrhata	tufted puffin	ABNNN12010	None	None	SSC	-	4112411	CRANNELL	Mapped	monocerata Animals - Birds - Alcidae - Fratercula cirrhata
Animals - Birds	Chaetura vauxi	Vauxs swift	ABNUA03020	None	None	SSC	-	4012472	EUREKA	Unprocessed	Animals - Birds - Apodidae - Chaetura vauxi
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Ardeidae - Ardea

Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	4012378	KORBEL	Unprocessed	herodias Animals - Birds - Ardeidae - Ardea
Animals - Birds	Botaurus Ientiginosus	American bittern	ABNGA01020	None	None	-	-	4012481	ARCATA NORTH	Unprocessed	herodias Animals - Birds - Ardeidae -
	Botaurus	American hittam	ABNGA01020	Nana	Nana			4012471	ARCATA	Unprocessed	Botaurus lentiginosus Animals - Birds -
Animals - Birds	lentiginosus	American bittern	ABNGAU1020	None	None	-	-	4012471	SOUTH	Onprocessed	Ardeidae - Botaurus lentiginosus
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Ardeidae - Egretta thula
Animals - Birds	Egretta thula	snowy egret	ABNGA06030	None	None	-	-	4012482	TYEE CITY	Unprocessed	
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Nycticorax nycticorax	black-crowned night heron	ABNGA11010	None	None	-	-	4012378	KORBEL	Unprocessed	Animals - Birds - Ardeidae - Nycticorax nycticorax
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius montanus	mountain plover	ABNNB03100	None	None	SSC	-	4112411	CRANNELL	Unprocessed	Animals - Birds - Charadriidae - Charadrius montanus
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	4112411	CRANNELL	Unprocessed	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	4012482	TYEE CITY	Mapped and Unprocessed	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Charadriidae - Charadrius nivosus nivosus
Animals - Birds	Falco columbarius	merlin	ABNKD06030	None	None	WL	-	4012472	EUREKA	Unprocessed	Animals - Birds - Falconidae - Falco columbarius
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	4012481	ARCATA NORTH	Mapped	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	4112411	CRANNELL	Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	FP	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Birds - Falconidae - Falco peregrinus anatum
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	4012378	KORBEL	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	4112411	CRANNELL	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Birds - Hirundinidae - Riparia riparia

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Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	4012472	EUREKA	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Hydrobates furcatus	fork-tailed storm- petrel	ABNDC04010	None	None	SSC	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Birds - Hydrobatidae - Hydrobates furcatus
Animals - Birds	Icteria virens	yellow-breasted chat	ABPBX24010	None	None	SSC	-	4012378	KORBEL	Unprocessed	Animals - Birds - Icteriidae - Icteria virens
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4112411	CRANNELL	Mapped	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	4012388	BLUE LAKE	Unprocessed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Poecile atricapillus	black-capped chickadee	ABPAW01010	None	None	WL	-	4012472	EUREKA	Unprocessed	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Poecile atricapillus	black-capped chickadee	ABPAW01010	None	None	WL	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Poecile atricapillus	black-capped chickadee	ABPAW01010	None	None	WL	-	4012378	KORBEL	Unprocessed	Animals - Birds - Paridae - Poecile atricapillus
Animals - Birds	Passerculus sandwichensis alaudinus	Bryants savannah sparrow	ABPBX99011	None	None	SSC	-	4012471	ARCATA SOUTH	Unprocessed	Animals - Birds - Passerellidae - Passerculus sandwichensis alaudinus
Animals - Birds	Passerculus sandwichensis alaudinus	Bryants savannah sparrow	ABPBX99011	None	None	SSC	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Passerellidae - Passerculus sandwichensis
Animals - Birds	Passerculus sandwichensis alaudinus	Bryants savannah sparrow	ABPBX99011	None	None	SSC	-	4012472	EUREKA	Unprocessed	alaudinus Animals - Birds - Passerellidae - Passerculus sandwichensis alaudinus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	4012471	ARCATA SOUTH	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	4012472	EUREKA	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	4012482	TYEE CITY	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	4112411	CRANNELL	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Nannopterum auritum	double-crested cormorant	ABNFD01020	None	None	WL	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopterum auritum	double-crested cormorant	ABNFD01020	None	None	WL	-	4012472	EUREKA	Unprocessed	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopterum auritum	double-crested cormorant	ABNFD01020	None	None	WL	-	4012471	ARCATA SOUTH	Mapped	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Nannopterum auritum	double-crested cormorant	ABNFD01020	None	None	WL	-	4012378	KORBEL	Unprocessed	Animals - Birds - Phalacrocoracidae - Nannopterum auritum
Animals - Birds	Sphyrapicus ruber	red-breasted sapsucker	ABNYF05020	None	None	-	-	4012472	EUREKA	Unprocessed	Animals - Birds - Picidae - Sphyrapicus ruber
Animals - Birds	Coturnicops noveboracensis	yellow rail	ABNME01010	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Rallidae - Coturnicops noveboracensis
Animals - Birds	Coturnicops noveboracensis	yellow rail	ABNME01010	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Birds - Rallidae - Coturnicops noveboracensis

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Animals - Birds	Rallus obsoletus obsoletus	California Ridgways rail	ABNME05011	Endangered	Endangered	FP	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Birds - Rallidae - Rallus obsoletus obsoletus
Animals - Birds	Rallus obsoletus obsoletus	California Ridgways rail	ABNME05011	Endangered	Endangered	FP	-	4012482	TYEE CITY	Mapped	Animals - Birds - Rallidae - Rallus obsoletus obsoletus
Animals - Birds	Numenius americanus	long-billed curlew	ABNNF07070	None	None	WL	-	4012471	ARCATA SOUTH	Unprocessed	
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-	4012471	ARCATA SOUTH	Unprocessed	
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-	4012481	ARCATA NORTH	Unprocessed	Animals - Birds - Strigidae - Asio flammeus
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-	4012472	EUREKA	Unprocessed	
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	4012388	BLUE LAKE	Unprocessed	
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4012378	KORBEL	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4012388	BLUE LAKE	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4012472	EUREKA	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4012481	ARCATA NORTH	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4112318	PANTHER CREEK	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Strix occidentalis caurina	Northern Spotted Owl	ABNSB12011	Threatened	Threatened	-	-	4112411	CRANNELL	Mapped	Animals - Birds - Strigidae - Strix occidentalis caurina
Animals - Birds	Contopus cooperi	olive-sided flycatcher	ABPAE32010	None	None	SSC	-	4012481	ARCATA NORTH	Unprocessed	
Animals - Birds	Empidonax traillii	willow flycatcher	ABPAE33040	None	Endangered	-	-	4012378	KORBEL	Unprocessed	
Animals - Fish	Acipenser medirostris pop. 1	green sturgeon - southern DPS	AFCAA01031	Threatened	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Fish - Acipenseridae - Acipenser medirostris pop. 1
Animals - Fish	Acipenser medirostris pop.	green sturgeon - southern DPS	AFCAA01031	Threatened	None	-	-	4012472	EUREKA	Mapped	Animals - Fish - Acipenseridae - Acipenser
Animals - Fish	Acipenser medirostris pop.	green sturgeon - northern DPS	AFCAA01032	None	None	SSC	-	4012472	EUREKA	Unprocessed	medirostris pop. 1 Animals - Fish - Acipenseridae - Acipenser
Animals - Fish	Acipenser medirostris pop.	green sturgeon - northern DPS	AFCAA01032	None	None	SSC	-	4012378	KORBEL	Unprocessed	medirostris pop. 2
Animals - Fish	Acipenser transmontanus	white sturgeon	AFCAA01050	None	None	SSC	-	4012472	EUREKA	Unprocessed	medirostris pop. 2
Animals - Fish	Eucyclogobius newberryi	tidewater goby	AFCQN04010	Endangered	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Eucyclogobius
Animals - Fish	Eucyclogobius newberryi	tidewater goby	AFCQN04010	Endangered	None	-	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Eucyclogobius
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	-	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Spirinchus
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	-	-	4012472	EUREKA	Mapped and Unprocessed	thaleichthys Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	-	-	4012482	TYEE CITY	Unprocessed	Animals - Fish - Osmeridae - Spirinchus
Animals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012482	TYEE CITY	Mapped	thaleichthys Animals - Fish - Osmeridae - Thaleichthys pacificus

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nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Fish - Osmeridae - Thaleichthys pacificus
nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4112411	CRANNELL	Unprocessed	
nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012472	EUREKA	Mapped	Animals - Fish - Osmeridae - Thaleichthys
nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012388	BLUE LAKE	Mapped	Animals - Fish - Osmeridae - Thaleichthys
nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
nimals - Fish	Thaleichthys pacificus	eulachon	AFCHB04010	Threatened	None	-	-	4012378	KORBEL	Mapped	Animals - Fish - Osmeridae - Thaleichthys pacificus
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Fish -
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4012378	KORBEL	Unprocessed	
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Fish -
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4112411	CRANNELL	Unprocessed	
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4112318	PANTHER CREEK	Unprocessed	
nimals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Fish -
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Fish -
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4112318	PANTHER CREEK	Unprocessed	
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4112411	CRANNELL	Unprocessed	Animals - Fish - Petromyzontidae Lampetra richardsoni
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4012472	EUREKA		Animals - Fish - Petromyzontidae Lampetra richardsoni
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4012378	KORBEL	Unprocessed	Animals - Fish - Petromyzontidae Lampetra richardsoni
nimals - Fish	Lampetra richardsoni	western brook lamprey	AFBAA02180	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped	Animals - Fish - Petromyzontidae Lampetra richardsoni
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Fish -
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4112318	PANTHER CREEK	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus clarkii clarkii
nimals - Fish	Oncorhynchus clarkii clarkii	coast cutthroat trout	AFCHA0208A	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Fish -
			AFCHA02010	None	None			4012481	ARCATA	Unprocessed	

0/20, 12.00) I IVI					D1030 1	TITE TABLE				
											Oncorhynchus gorbuscha
Animals - Fish	Oncorhynchus keta	chum salmon	AFCHA02020	None	None	-	-	4012481	ARCATA NORTH	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus keta
nimals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch pop. 2
nimals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4112318	PANTHER CREEK	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4112411	CRANNELL	Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4012388	BLUE LAKE	Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4012472	EUREKA	Mapped and Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4012378	KORBEL	Mapped and Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern	AFCHA02032	Threatened	Threatened	-	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus
Animals - Fish	Oncorhynchus mykiss irideus pop. 1	California ESU steelhead - Klamath Mountains Province DPS	AFCHA0209D	None	None	SSC	-	4112318	PANTHER CREEK	Unprocessed	kisutch pop. 2 Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	-	-	4112318	PANTHER CREEK	Mapped	pop. 1 Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	-	-	4012481	ARCATA NORTH	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	-	-	4012482	TYEE CITY	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	-	-	4012388	BLUE LAKE	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	-	-	4012378	KORBEL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 48
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012378	KORBEL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012388	BLUE LAKE	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012472	EUREKA	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012482	TYEE CITY	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4012481	ARCATA NORTH	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4112318	PANTHER CREEK	Mapped	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus pop. 49
Animals - Fish	Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	-	-	4112411	CRANNELL	Mapped	Animals - Fish - Salmonidae - Oncorhynchus

			450114					4445	0044:::-::		mykiss irideus pop. 49
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4112411	CRANNELL	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop 17
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4112318	PANTHER CREEK	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop 17
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4012481	ARCATA NORTH	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4012472	EUREKA	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4012388	BLUE LAKE	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4012471	ARCATA SOUTH	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	4012378	KORBEL	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	Candidate	Threatened	SSC	-	4012378	KORBEL	Unprocessed	
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	Candidate	Threatened	SSC	-	4112318	PANTHER CREEK	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha por 30
Animals - Fish	Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	Candidate	Threatened	SSC	-	4112411	CRANNELL	Unprocessed	
Animals - Insects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4112411	CRANNELL	Mapped and Unprocessed	Animals - Insect
Animals - Insects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Insect Apidae - Bombu caliginosus
Animals - nsects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4012482	TYEE CITY	Mapped and Unprocessed	Animals - Insect Apidae - Bombu caliginosus
Animals - nsects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4012472	EUREKA		Animals - Insect Apidae - Bombu caliginosus
Animals - nsects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Insec Apidae - Bombu caliginosus
Animals - nsects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Insect Apidae - Bombu caliginosus
Animals - nsects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	4012482	TYEE CITY	Mapped	Animals - Insect Apidae - Bombu crotchii
Animals - nsects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	4012481	ARCATA NORTH	Mapped	Animals - Insect Apidae - Bombu crotchii
Animals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4012482	TYEE CITY	Mapped and Unprocessed	Animals - Insect Apidae - Bombu occidentalis
Animals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4112411	CRANNELL	Mapped	Animals - Insect Apidae - Bombu occidentalis
Animals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Insect
nimals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Insec
Animals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Insec
Animals - nsects	Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	-	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Insec
Animals - nsects	Cicindela hirticollis gravida	sandy beach tiger beetle	IICOL02101	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Insect Carabidae - Cicindela hirtico gravida
Animals - Insects	Cicindela hirticollis gravida	sandy beach tiger beetle	IICOL02101	None	None	-	-	4012472	EUREKA	Mapped	Animals - Insect Carabidae - Cicindela hirtico

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Animals - Insects	Scaphinotus behrensi	Behrens snail- eating beetle	IICOL4L070	None	None	-	-	4012481	ARCATA NORTH	Mapped	Animals - Insect Carabidae - Scaphinotus behrensi
Animals - Insects	Scaphinotus behrensi	Behrens snail- eating beetle	IICOL4L070	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Insect Carabidae - Scaphinotus behrensi
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4012378	KORBEL	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4012481	ARCATA NORTH	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4112411	CRANNELL	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4012472	EUREKA	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Aplodontia rufa humboldtiana	Humboldt mountain beaver	AMAFA01017	None	None	-	-	4012388	BLUE LAKE	Mapped	Animals - Mammals - Aplodontiidae - Aplodontia rufa humboldtiana
Animals - Mammals	Arborimus albipes	white-footed vole	AMAFF23010	None	None	SSC	-	4012482	TYEE CITY	Mapped	Animals - Mammals - Cricetidae - Arborimus albip
Animals - Mammals	Arborimus albipes	white-footed vole	AMAFF23010	None	None	SSC	-	4012378	KORBEL	Mapped	Animals - Mammals - Cricetidae - Arborimus albip
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Cricetidae - Arborimus pom
Animals - Mammals	Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012471	ARCATA SOUTH	·	Animals - Mammals - Cricetidae - Arborimus pom Animals -
Animals - Mammals Animals -	Arborimus pomo Arborimus pomo	Sonoma tree vole Sonoma tree	AMAFF23030 AMAFF23030	None	None	SSC	-	4012481	ARCATA NORTH CRANNELL	Mapped and	Animais - Mammals - Cricetidae - Arborimus pom Animals -
Mammals Animals -	Arborimus pomo	vole Sonoma tree	AMAFF23030	None	None	SSC	-	4112318	PANTHER	Unprocessed	Mammals - Cricetidae - Arborimus pom
Mammals Animals - Mammals	Arborimus pomo	vole Sonoma tree vole	AMAFF23030	None	None	SSC	-	4012388	CREEK BLUE LAKE	Mapped and Unprocessed	Mammals - Cricetidae - Arborimus pom Animals - Mammals - Cricetidae -
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012388	BLUE LAKE	Unprocessed	Arborimus pom Animals - Mammals - Erethizontidae Erethizon
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Mammals - Erethizontidae Erethizon
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4112411	CRANNELL	Mapped	Animals - Mammals - Erethizontidae Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Mammals - Erethizontidae Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012482	TYEE CITY	Unprocessed	
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Mammals - Erethizontidae Erethizon dorsatum
Animals - Mammals	Erethizon dorsatum	North American porcupine	AMAFJ01010	None	None	-	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Mammals - Erethizontidae

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Animals - Mammals	Enhydra lutris nereis	southern sea otter	AMAJF09012	Threatened	None	FP	-	4112411	CRANNELL	Unprocessed	Animals - Mammals - Mustelidae - Enhydra lutris nereis
Animals - Mammals	Enhydra lutris nereis	southern sea otter	AMAJF09012	Threatened	None	FP	-	4012472	EUREKA	Unprocessed	
Animals - Mammals	Martes caurina humboldtensis	Humboldt marten	AMAJF01012	Threatened	Endangered	SSC	-	4112411	CRANNELL	Unprocessed	Animals - Mammals - Mustelidae - Martes caurina humboldtensis
Animals - Mammals	Martes caurina humboldtensis	Humboldt marten	AMAJF01012	Threatened	Endangered	SSC	-	4112318	PANTHER CREEK	Unprocessed	Animals - Mammals - Mustelidae - Martes caurina humboldtensis
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4112318	PANTHER CREEK	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennant
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4112411	CRANNELL	Unprocessed	Animals - Mammals - Mustelidae - Pekania pennant
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4012481	ARCATA NORTH	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Pekania pennant
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4012388	BLUE LAKE	Mapped and Unprocessed	Animals -
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals -
Animals - Mammals	Pekania pennanti	Fisher	AMAJF01020	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals -
Animals - Mammals	Corynorhinus townsendii	Townsends big- eared bat	AMACC08010	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped	Animals - Mammals - Vespertilionidae Corynorhinus townsendii
Animals - Mammals	Corynorhinus townsendii	Townsends big- eared bat	AMACC08010	None	None	SSC	-	4012378	KORBEL	Mapped	Animals - Mammals - Vespertilionidae Corynorhinus townsendii
Animals - Mammals	Lasionycteris noctivagans	silver-haired bat	AMACC02010	None	None	-	-	4012472	EUREKA	Unprocessed	
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05032	None	None	-	-	4012471	ARCATA SOUTH	Unprocessed	-
Animals - Mammals	Myotis evotis	long-eared myotis	AMACC01070	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Animals - Mammals - Vespertilionidae Myotis evotis
Animals - Mammals	Myotis evotis	long-eared myotis	AMACC01070	None	None	-	-	4012481	ARCATA NORTH	Mapped	Animals - Mammals - Vespertilionidae Myotis evotis
Animals - Mammals	Myotis evotis	long-eared myotis	AMACC01070	None	None	-	-	4112411	CRANNELL	Mapped	Animals - Mammals - Vespertilionidae Myotis evotis
Animals - Mammals	Myotis yumanensis	Yuma myotis	AMACC01020	None	None	-	-	4012472	EUREKA	Unprocessed	
Animals - Mollusks	Littorina subrotundata	Newcombs littorine snail	IMGASR3010	None	None	-	-	4012472	EUREKA	Unprocessed	Animals - Mollusks - Littorinidae - Littorina
Animals - Mollusks	Littorina subrotundata	Newcombs littorine snail	IMGASR3010	None	None	-	-	4012471	ARCATA SOUTH	Unprocessed	Mollusks - Littorinidae - Littorina
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	4012471	ARCATA SOUTH	Unprocessed	Mollusks - Margaritiferidae - Margaritifera
Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	4012388	BLUE LAKE	Mapped	falcata Animals - Mollusks - Margaritiferidae -

Animals - Mollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	4112411	CRANNELL	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera falcata
nimals - lollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	4112318	PANTHER CREEK	Mapped	Animals - Mollusks - Margaritiferidae Margaritifera falcata
nimals - ollusks	Margaritifera falcata	western pearlshell	IMBIV27020	None	None	-	-	4012481	ARCATA NORTH	Mapped	Animals - Mollusks - Margaritiferidae - Margaritifera
nimals - ollusks	Anodonta californiensis	California floater	IMBIV04220	None	None	-	-	4012472	EUREKA	Mapped and Unprocessed	falcata Animals - Mollusks - Unionidae - Anodonta californiensis
nimals - eptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	4012472	EUREKA	Mapped and Unprocessed	Animals - Reptile - Emydidae - Emys marmorata
nimals - eptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	4012388	BLUE LAKE	Mapped	Animals - Reptile - Emydidae - Emys marmorata
nimals - eptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	4012481	ARCATA NORTH	Mapped	Animals - Reptile - Emydidae - Emys marmorata
nimals - eptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	4112411	CRANNELL	Mapped	Animals - Reptile - Emydidae - Emys marmorata
nimals - eptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	4012471	ARCATA SOUTH	Mapped and Unprocessed	Animals - Reptile - Emydidae - Emys marmorata
nimals - eptiles	Emys marmorata	turtle	ARAAD02030	None	None	SSC	-	4012378	KORBEL	Mapped and Unprocessed	Animals - Reptile - Emydidae - Emys marmorata
ommunity - errestrial	Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	CTT52110CA	None	None	-	-	4012471	ARCATA SOUTH	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
ommunity - errestrial	Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	CTT52110CA	None	None	-	-	4012482	TYEE CITY	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
ommunity - errestrial	Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	CTT52110CA	None	None	-	-	4012472	EUREKA	Mapped	Community - Terrestrial - Northern Coasta
ommunity - errestrial	Northern Foredune Grassland	Northern Foredune Grassland	CTT21211CA	None	None	-	-	4012482	TYEE CITY	Mapped	Salt Marsh Community - Terrestrial - Northern Foredune Grassland
lants - ryophytes	Trichodon cylindricus	cylindrical trichodon	NBMUS7N020	None	None	-	2B.2	4012481	ARCATA NORTH	Mapped	Plants - Bryophytes - Ditrichaceae - Trichodon cylindricus
lants - ryophytes	Fissidens pauperculus	minute pocket moss	NBMUS2W0U0	None	None	-	1B.2	4012481	ARCATA NORTH	Mapped	Plants - Bryophytes - Fissidentaceae - Fissidens pauperculus
lants - ryophytes	Fissidens pauperculus	minute pocket moss	NBMUS2W0U0	None	None	-	1B.2	4012471	ARCATA SOUTH	Mapped	Plants - Bryophytes - Fissidentaceae - Fissidens pauperculus
lants - ichens	Sulcaria spiralifera	twisted horsehair lichen	NLT0042560	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Lichens - Alectoriaceae - Sulcaria spiralifei
ants - chens	Sulcaria spiralifera	twisted horsehair lichen	NLT0042560	None	None	-	1B.2	4112411	CRANNELL	Mapped	Plants - Lichens Alectoriaceae - Sulcaria spiralife
ants - chens	Sulcaria spiralifera	twisted horsehair lichen	NLT0042560	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Lichens Alectoriaceae - Sulcaria spiralife
ants - chens	Usnea longissima	Methuselahs beard lichen	NLLEC5P420	None	None	-	4.2	4012388	BLUE LAKE	Unprocessed	Plants - Lichens Parmeliaceae - Usnea longissim
lants - chens	Usnea longissima	Methuselahs beard lichen	NLLEC5P420	None	None	-	4.2	4112318	PANTHER CREEK	Unprocessed	Plants - Lichens Parmeliaceae - Usnea longissim
ants - chens	Usnea longissima	Methuselahs beard lichen	NLLEC5P420	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Lichens Parmeliaceae - Usnea longissim
ants - chens	Usnea Iongissima	Methuselahs beard lichen	NLLEC5P420	None	None	-	4.2	4012471	ARCATA SOUTH	Mapped	Plants - Lichens Parmeliaceae - Usnea longissim
ants - chens	Usnea Iongissima	Methuselahs beard lichen	NLLEC5P420	None	None	-	4.2	4012378	KORBEL	Mapped and Unprocessed	Plants - Lichens Parmeliaceae - Usnea longissim
lants - ascular	Angelica lucida	sea-watch	PDAPI070G0	None	None	-	4.2	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Apiaceae - Angelica lucida
lants - ascular	Angelica lucida	sea-watch	PDAPI070G0	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Vascular Apiaceae - Angelica lucida
lants - ascular	Angelica lucida	sea-watch	PDAPI070G0	None	None	-	4.2	4012482	TYEE CITY	Unprocessed	Plants - Vascular Apiaceae -

•											Angelica lucida
Plants - Vascular	Angelica lucida	sea-watch	PDAPI070G0	None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular - Apiaceae - Angelica lucida
Plants - Vascular	Angelica lucida	sea-watch	PDAPI070G0	None	None	-	4.2	4012472	EUREKA	Unprocessed	Plants - Vascular - Apiaceae - Angelica lucida
Plants - Vascular	Glehnia littoralis ssp. leiocarpa	American glehnia	PDAPI13011	None	None	-	4.2	4012472	EUREKA	Unprocessed	Plants - Vascular - Apiaceae - Glehnia littoralis
Plants - Vascular	Glehnia littoralis ssp. leiocarpa	American glehnia	PDAPI13011	None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	ssp. leiocarpa Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa
Plants - Vascular	Glehnia littoralis ssp. leiocarpa	American glehnia	PDAPI13011	None	None	-	4.2	4012482	TYEE CITY	Unprocessed	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa
Plants - Vascular	Glehnia littoralis ssp. leiocarpa	American glehnia	PDAPI13011	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa
Plants - Vascular	Hemizonia congesta ssp. tracyi	Tracys tarplant	PDAST4R067	None	None	-	4.3	4012378	KORBEL	Unprocessed	Plants - Vascular - Asteraceae - Hemizonia congesta ssp. tracyi
Plants - Vascular	Hesperevax sparsiflora var. brevifolia	short-leaved evax	PDASTE5011	None	None	-	1B.2	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Hesperevax sparsiflora var. brevifolia
Plants - Vascular	Lasthenia californica ssp. macrantha	perennial goldfields	PDAST5L0C5	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Asteraceae - Lasthenia californica ssp. macrantha
Plants - Vascular	Layia carnosa	beach layia	PDAST5N010	Threatened	Endangered	-	1B.1	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Layia carnosa
Plants - Vascular	Layia carnosa	beach layia	PDAST5N010	Threatened	Endangered	-	1B.1	4112411	CRANNELL	Mapped	Plants - Vascular - Asteraceae - Layia carnosa
Plants - Vascular	Layia carnosa	beach layia	PDAST5N010	Threatened	Endangered	-	1B.1	4012482	TYEE CITY	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Layia carnosa
Plants - Vascular	Packera bolanderi var. bolanderi	seacoast ragwort	PDAST8H0H1	None	None	-	2B.2	4112411	CRANNELL	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi
Plants - Vascular	Packera bolanderi var. bolanderi	seacoast ragwort	PDAST8H0H1	None	None	-	2B.2	4112318	PANTHER CREEK	Mapped	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi
Plants - Vascular	Cardamine angulata	seaside bittercress	PDBRA0K010	None	None	-	2B.1	4012471	ARCATA SOUTH	Mapped	Plants - Vascular - Brassicaceae - Cardamine angulata
Plants - Vascular	Erysimum menziesii	Menzies wallflower	PDBRA160R0	Endangered	Endangered	-	1B.1	4012482	TYEE CITY	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Erysimum menziesii
Plants - Vascular	Erysimum menziesii	Menzies wallflower	PDBRA160R0	Endangered	Endangered	-	1B.1	4012472	EUREKA	Mapped	Plants - Vascular - Brassicaceae - Erysimum menziesii
Plants - Vascular	Silene scouleri ssp. scouleri	Scoulers catchfly	PDCAR0U1MC	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Caryophyllaceae - Silene scouleri ssp. scouleri
Plants - Vascular	Spergularia canadensis var. occidentalis	western sand- spurrey	PDCAR0W032	None	None	-	2B.1	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Caryophyllaceae - Spergularia canadensis var. occidentalis
Plants - Vascular	Spergularia canadensis var. occidentalis	western sand- spurrey	PDCAR0W032	None	None	-	2B.1	4012471	ARCATA SOUTH	Mapped	Plants - Vascular - Caryophyllaceae - Spergularia canadensis var. occidentalis
Plants - Vascular	Carex arcta	northern clustered sedge	PMCYP030X0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular - Cyperaceae - Carex arcta
Plants - Vascular	Carex arcta	northern clustered sedge	PMCYP030X0	None	None	-	2B.2	4012481	ARCATA NORTH	Mapped	Plants - Vascular - Cyperaceae - Carex arcta
Plants - Vascular	Carex leptalea	bristle-stalked sedge	PMCYP037E0	None	None	-	2B.2	4112411	CRANNELL	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex leptalea
Plants - Vascular	Carex lyngbyei	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4112411	CRANNELL	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei
Plants - Vascular	Carex lyngbyei	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei
Plants - Vascular	Carex lyngbyei	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012481	ARCATA NORTH	Mapped	Plants - Vascular - Cyperaceae - Carex lyngbyei
Plants - Vascular	Carex lyngbyei	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Cyperaceae - Carex lyngbyei

10/23, 12.3	OFIVI					DIUSU	Print Table				
Plants - Vascular	Carex lyngbyei	Lyngbyes sedge	PMCYP037Y0	None	None	-	2B.2	4012471	ARCATA SOUTH	Mapped and Unprocessed	Plants - Vascular Cyperaceae -
Plants - Vascular	Carex praticola	northern meadow sedge	PMCYP03B20	None	None	-	2B.2	4012471	ARCATA SOUTH	Mapped	Carex lyngbyei Plants - Vascular Cyperaceae -
Plants - Vascular	Carex praticola	northern meadow sedge	PMCYP03B20	None	None	-	2B.2	4012472	EUREKA	Mapped	Carex praticola Plants - Vascular Cyperaceae -
Plants - Vascular	Eleocharis parvula	small spikerush	PMCYP091G0	None	None	-	4.3	4012471	ARCATA SOUTH	Unprocessed	Carex praticola Plants - Vascular Cyperaceae -
Plants -	Astragalus	coastal marsh	PDFAB0F7B2	None	None	-	1B.2	4012472	EUREKA	Mapped	Eleocharis parvu Plants - Vascular
/ascular	pycnostachyus var. pycnostachyus	milk-vetch									Fabaceae - Astragalus pycnostachyus var. pycnostachyus
Plants - /ascular	Astragalus rattanii var. rattanii	Rattans milk- vetch	PDFAB0F7E2	None	None	-	4.3	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular Fabaceae - Astragalus rattar var. rattanii
Plants - Vascular	Hosackia gracilis	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012472	EUREKA	Unprocessed	Plants - Vascular Fabaceae - Hosackia gracilis
Plants - /ascular	Hosackia gracilis	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Fabaceae - Hosackia gracilis
Plants - /ascular	Hosackia gracilis	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	4012378	KORBEL	Unprocessed	Plants - Vascular Fabaceae -
Plants - Vascular	Lathyrus glandulosus	sticky pea	PDFAB251A0	None	None	-	4.3	4012378	KORBEL	Unprocessed	Hosackia gracilis Plants - Vascular Fabaceae - Lathyrus glandulosus
Plants - √ascular	Lathyrus glandulosus	sticky pea	PDFAB251A0	None	None	-	4.3	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Fabaceae - Lathyrus glandulosus
Plants - Vascular	Lathyrus glandulosus	sticky pea	PDFAB251A0	None	None	-	4.3	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular Fabaceae - Lathyrus glandulosus
Plants - /ascular	Lathyrus glandulosus	sticky pea	PDFAB251A0	None	None	-	4.3	4012388	BLUE LAKE	Unprocessed	Plants - Vascular Fabaceae - Lathyrus
Plants - Vascular	Lathyrus japonicus	seaside pea	PDFAB250C0	None	None	-	2B.1	4012481	ARCATA NORTH	Mapped	glandulosus Plants - Vascular Fabaceae - Lathyrus
Plants - Vascular	Lathyrus japonicus	seaside pea	PDFAB250C0	None	None	-	2B.1	4012472	EUREKA	Mapped	japonicus Plants - Vascular Fabaceae - Lathyrus
Plants - Vascular	Lathyrus japonicus	seaside pea	PDFAB250C0	None	None	-	2B.1	4112411	CRANNELL	Mapped	japonicus Plants - Vascular Fabaceae - Lathyrus
Plants - Vascular	Lathyrus japonicus	seaside pea	PDFAB250C0	None	None	-	2B.1	4012471	ARCATA SOUTH	Mapped	japonicus Plants - Vascular Fabaceae - Lathyrus japonicus
Plants - Vascular	Lathyrus palustris	marsh pea	PDFAB250P0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular Fabaceae - Lathyrus palustri
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4012388	BLUE LAKE	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4112411	CRANNELL	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4112318	PANTHER CREEK	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Ribes laxiflorum	trailing black currant	PDGRO020V0	None	None	-	4.3	4012378	KORBEL	Unprocessed	Plants - Vascular Grossulariaceae Ribes laxiflorum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4112318	PANTHER CREEK	Mapped	Plants - Vascular Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium oregonum	giant fawn lily	PMLIL0U0C0	None	None	-	2B.2	4012388	BLUE LAKE	Mapped	Plants - Vascular Liliaceae - Erythronium oregonum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4012388	BLUE LAKE	Mapped and Unprocessed	Plants - Vascular Liliaceae - Erythronium revolutum
Plants - Vascular	Erythronium revolutum	coast fawn lily	PMLIL0U0F0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular Liliaceae - Erythronium revolutum

*											
											Erythronium revolutum
lants - ascular	Fritillaria purdyi	Purdys fritillary	PMLIL0V0H0	None	None	-	4.3	4012378	KORBEL	Unprocessed	Plants - Vascular Liliaceae - Fritillaria purdyi
lants - ascular	Lilium kelloggii	Kelloggs lily	PMLIL1A0A0	None	None	-	4.3	4012378	KORBEL	Unprocessed	Plants - Vascular Liliaceae - Lilium kelloggii
lants - ascular	Lilium kelloggii	Kelloggs lily	PMLIL1A0A0	None	None	-	4.3	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Liliaceae - Lilium
lants - ascular	Lilium occidentale	western lily	PMLIL1A0G0	Endangered	Endangered	-	1B.1	4012471	ARCATA SOUTH	Mapped	kelloggii Plants - Vascular Liliaceae - Lilium
lants - ascular	Lilium occidentale	western lily	PMLIL1A0G0	Endangered	Endangered	-	1B.1	4012472	EUREKA	Mapped	occidentale Plants - Vascular Liliaceae - Lilium
lants - ascular	Lilium occidentale	western lily	PMLIL1A0G0	Endangered	Endangered	-	1B.1	4012481	ARCATA NORTH	Mapped	occidentale Plants - Vascular Liliaceae - Lilium
lants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4012481	ARCATA NORTH	Mapped and	occidentale Plants - Vascular Lycopodiaceae -
		suppling pine	PPLYC01080	None	None		4.1	4012388		·	Lycopodium clavatum
ants - ascular	Lycopodium clavatum	running-pine	PPLYCUIU00	None	None	-	4.1	4012300	BLUE LAKE	Mapped and Unprocessed	Plants - Vascular Lycopodiaceae - Lycopodium clavatum
ants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4012472	EUREKA	Unprocessed	
lants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4112318	PANTHER CREEK	Mapped and Unprocessed	Plants - Vascular
lants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4112411	CRANNELL	Mapped and Unprocessed	clavatum Plants - Vascular
lants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4012471	ARCATA SOUTH	Mapped and Unprocessed	clavatum Plants - Vascular Lycopodiaceae - Lycopodium
lants - ascular	Lycopodium clavatum	running-pine	PPLYC01080	None	None	-	4.1	4012378	KORBEL	Mapped and Unprocessed	Lycopodium
lants - ascular	Iliamna latibracteata	California globe mallow	PDMAL0K040	None	None	-	1B.2	4012378	KORBEL	Mapped	clavatum Plants - Vascular Malvaceae - Iliamna
lants - ascular	Iliamna latibracteata	California globe mallow	PDMAL0K040	None	None	-	1B.2	4012388	BLUE LAKE	Mapped	Plants - Vascular Malvaceae - Iliamna
lants - ascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	4012388	BLUE LAKE	Mapped and Unprocessed	Plants - Vascular Malvaceae - Sidalcea malachroides
lants - ascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	4012481	ARCATA NORTH	Mapped and Unprocessed	Plants - Vascular
lants - ascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular
lants - ascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	4012378	KORBEL	Mapped and Unprocessed	Plants - Vascular
lants - ascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	4012471	ARCATA SOUTH	Mapped and Unprocessed	Plants - Vascular
lants - ascular	Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	PDMAL110F9	None	None	-	1B.2	4012378	KORBEL	Mapped and Unprocessed	Plants - Vascular Malvaceae - Sidalcea malviflora ssp.
lants - ascular	Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	PDMAL110F9	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular Malvaceae - Sidalcea malviflora ssp.
lants - ascular	Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	PDMAL110F9	None	None	-	1B.2	4012481	ARCATA NORTH	Mapped	patula Plants - Vascular Malvaceae - Sidalcea malviflora ssp.
lants - ascular	Sidalcea oregana ssp. eximia	coast checkerbloom	PDMAL110K9	None	None	-	1B.2	4012481	ARCATA NORTH	Mapped	patula Plants - Vascular Malvaceae - Sidalcea oregana
lants - ascular	Sidalcea oregana ssp. eximia	coast checkerbloom	PDMAL110K9	None	None	-	1B.2	4012472	EUREKA	Mapped	ssp. eximia Plants - Vascular Malvaceae - Sidalcea oregana ssp. eximia
lants - ascular	Monotropa uniflora	ghost-pipe	PDMON03030	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular Monotropaceae -

			DD1/2:::::				00.0	40.0	1DC:-:		Monotropa uniflora
Plants - √ascular	Monotropa uniflora	ghost-pipe	PDMON03030	None	None	-	2B.2	4012471	ARCATA SOUTH	Mapped	Plants - Vascula Monotropaceae Monotropa uniflora
lants - ascular	Pityopus californicus	California pinefoot	PDMON05010	None	None	-	4.2	4012378	KORBEL	Unprocessed	
Plants - ⁄ascular	Pityopus californicus	California pinefoot	PDMON05010	None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	Plants - Vasculi Monotropaceae Pityopus
Plants - /ascular	Pityopus californicus	California pinefoot	PDMON05010	None	None	-	4.2	4012388	BLUE LAKE	Unprocessed	Monotropaceae Pityopus
Plants - ⁄ascular	Pityopus californicus	California pinefoot	PDMON05010	None	None	-	4.2	4112411	CRANNELL	Unprocessed	californicus Plants - Vasculi Monotropaceae Pityopus californicus
Plants - ⁄ascular	Pityopus californicus	California pinefoot	PDMON05010	None	None	-	4.2	4112318	PANTHER CREEK	Unprocessed	Plants - Vascul Monotropaceae Pityopus
Plants - /ascular	Montia howellii	Howells montia	PDPOR05070	None	None	-	2B.2	4112318	PANTHER CREEK	Mapped	Plants - Vascula Montiaceae - Montia howellii
Plants - ⁄ascular	Montia howellii	Howells montia	PDPOR05070	None	None	-	2B.2	4012481	ARCATA NORTH	Mapped	Plants - Vasculi Montiaceae - Montia howellii
Plants - /ascular	Montia howellii	Howells montia	PDPOR05070	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascula Montiaceae - Montia howellii
Plants - /ascular	Montia howellii	Howells montia	PDPOR05070	None	None	-	2B.2	4012378	KORBEL	Mapped and Unprocessed	Montia howellii
Plants - /ascular	Montia howellii	Howells montia	PDPOR05070	None	None	-	2B.2	4012471	ARCATA SOUTH	Mapped	Plants - Vascula Montiaceae - Montia howellii
Plants - ⁄ascular	Abronia umbellata var. breviflora	pink sand- verbena	PDNYC010N4	None	None	-	1B.1	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascula Nyctaginaceae Abronia umbell var. breviflora
Plants - /ascular	Abronia umbellata var. breviflora	pink sand- verbena	PDNYC010N4	None	None	-	1B.1	4012481	ARCATA NORTH	Mapped	Plants - Vascula Nyctaginaceae Abronia umbell var. breviflora
Plants - /ascular	Abronia umbellata var. breviflora	pink sand- verbena	PDNYC010N4	None	None	-	1B.1	4112411	CRANNELL	Mapped	Plants - Vascula Nyctaginaceae Abronia umbell var. breviflora
Plants - /ascular	Abronia umbellata var. breviflora	pink sand- verbena	PDNYC010N4	None	None	-	1B.1	4012482	TYEE CITY	Mapped	Plants - Vascula Nyctaginaceae Abronia umbell var. breviflora
Plants - /ascular	Epilobium septentrionale	Humboldt County fuchsia	PDONA06110	None	None	-	4.3	4012378	KORBEL	Unprocessed	
Plants - /ascular	Oenothera wolfii	Wolfs evening- primrose	PDONA0C1K0	None	None	-	1B.1	4112411	CRANNELL	Mapped	Plants - Vascula Onagraceae - Oenothera wolf
Plants - /ascular	Oenothera wolfii	Wolfs evening- primrose	PDONA0C1K0	None	None	-	1B.1	4012481	ARCATA NORTH	Mapped	Plants - Vascula Onagraceae - Oenothera wolf
Plants - ⁄ascular	Oenothera wolfii	Wolfs evening- primrose	PDONA0C1K0	None	None	-	1B.1	4012472	EUREKA	Mapped	Plants - Vascula Onagraceae - Oenothera wolf
Plants - /ascular	Listera cordata	heart-leaved twayblade		None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	Orchidaceae - Listera cordata
Plants - /ascular	Listera cordata	heart-leaved twayblade		None	None	-	4.2	4012388	BLUE LAKE	Unprocessed	Orchidaceae - Listera cordata
Plants - /ascular	Listera cordata	heart-leaved twayblade	PMORC1N060		None	-	4.2	4112411	CRANNELL		Plants - Vascul Orchidaceae - Listera cordata
Plants - ⁄ascular	Listera cordata	heart-leaved twayblade	PMORC1N060		None	-	4.2	4112318	PANTHER CREEK	•	Plants - Vasculi Orchidaceae - Listera cordata
lants - ascular	Listera cordata	heart-leaved twayblade		None	None	-	4.2	4012378	KORBEL	Unprocessed	Orchidaceae - Listera cordata
Plants - Vascular	Listera cordata Piperia candida	heart-leaved twayblade white-flowered	PMORC1N060 PMORC1X050		None	-	1B.2	4012471	ARCATA SOUTH CRANNELL	Unprocessed	Plants - Vascul Orchidaceae - Listera cordata Plants - Vascul
lants - lascular	Castilleja	rein orchid Humboldt Bay	PDSCR0D402	None	None	-	1B.2	4012482	TYEE CITY	Марред	Orchidaceae - Piperia candida Plants - Vascula
ascular	ambigua var. humboldtiensis	owls-clover	. 550105402	.1010	1,0110		15.2	7012702	TILL OIL	марроч	Orobanchacea Castilleja ambig var. humboldtiensis
Plants - /ascular	Castilleja ambigua var. humboldtiensis	Humboldt Bay owls-clover	PDSCR0D402	None	None	-	1B.2	4012481	ARCATA NORTH	Mapped	Plants - Vascula Orobanchaceae Castilleja ambig var.

10/23, 12.30	J I IVI					D1050 F	TITIL TADIE				
Plants - Vascular	Castilleja ambigua var. humboldtiensis	Humboldt Bay owls-clover	PDSCR0D402	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Orobanchaceae - Castilleja ambigua var.
Plants - Vascular	Castilleja ambigua var. humboldtiensis	Humboldt Bay owls-clover	PDSCR0D402	None	None	-	1B.2	4012471	ARCATA SOUTH	Mapped and Unprocessed	humboldtiensis Plants - Vascular - Orobanchaceae - Castilleja ambigua var.
Plants -	Castilleja litoralis		PDSCR0D012	None	None	-	2B.2	4012472	EUREKA	Mapped	humboldtiensis Plants - Vascular -
Vascular	0 1711 1 171 17	paintbrush	DD00D0D010		<u></u>		00.0	4440444	ODANINE.		Orobanchaceae - Castilleja litoralis
Plants - Vascular	Castilleja litoralis	Oregon coast paintbrush	PDSCR0D012	None	None	-	2B.2	4112411	CRANNELL	Mapped	Plants - Vascular - Orobanchaceae - Castilleja litoralis
Plants - Vascular	Chloropyron maritimum ssp. palustre	Point Reyes salty birds-beak	PDSCR0J0C3	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre
Plants - Vascular	Chloropyron maritimum ssp. palustre	Point Reyes salty birds-beak	PDSCR0J0C3	None	None	-	1B.2	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre
Plants - Vascular	Chloropyron maritimum ssp. palustre	Point Reyes salty birds-beak	PDSCR0J0C3	None	None	-	1B.2	4012471	ARCATA SOUTH	Mapped	Plants - Vascular - Orobanchaceae - Chloropyron maritimum ssp. palustre
Plants - Vascular	Collinsia corymbosa	round-headed collinsia	PDSCR0H060	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Plantaginaceae - Collinsia corymbosa
Plants - Vascular	Calamagrostis bolanderi	Bolanders reed grass	PMPOA17010	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Vascular - Poaceae - Calamagrostis bolanderi
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4112318	PANTHER CREEK	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4012472	EUREKA	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4012388	BLUE LAKE	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Pleuropogon refractus	nodding semaphore grass	PMPOA4Y080	None	None	-	4.2	4012378	KORBEL	Unprocessed	Plants - Vascular - Poaceae - Pleuropogon refractus
Plants - Vascular	Gilia capitata ssp. pacifica	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4012388	BLUE LAKE	Unprocessed	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica
Plants - Vascular	Gilia capitata ssp. pacifica	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4012472	EUREKA	Mapped	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica
Plants - Vascular	Gilia capitata ssp. pacifica	Pacific gilia	PDPLM040B6	None	None	-	1B.2	4112411	CRANNELL	Mapped	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica
Plants - Vascular	Gilia millefoliata	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4112411	CRANNELL	Mapped and Unprocessed	Plants - Vascular - Polemoniaceae - Gilia millefoliata
Plants - Vascular	Gilia millefoliata	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4012482	TYEE CITY	Mapped	Plants - Vascular - Polemoniaceae - Gilia millefoliata
Plants - Vascular	Gilia millefoliata	dark-eyed gilia	PDPLM04130	None	None	-	1B.2	4012472	EUREKA	Mapped and Unprocessed	Plants - Vascular - Polemoniaceae - Gilia millefoliata
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4012388	BLUE LAKE	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae -
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4112318	PANTHER CREEK	Unprocessed	Coptis laciniata Plants - Vascular - Ranunculaceae - Coptis laciniata
Plants - Vascular	Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	-	4.2	4012378	KORBEL	Unprocessed	Plants - Vascular - Ranunculaceae - Coptis laciniata
Plants - Vascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4012378	KORBEL	Unprocessed	Plants - Vascular - Saxifragaceae - Chrysosplenium glechomifolium

6/23, 12:	30 PIVI					BIG	os6 Print Table				
Plants - /ascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4012471	ARCATA SOUTH	Unprocessed	Plants - Vascular Saxifragaceae - Chrysosplenium glechomifolium
Plants - /ascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4112411	CRANNELL	Unprocessed	Plants - Vascular Saxifragaceae - Chrysosplenium glechomifolium
Plants - /ascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4012388	BLUE LAKE	Unprocessed	Plants - Vascular Saxifragaceae - Chrysosplenium glechomifolium
Plants - /ascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular Saxifragaceae - Chrysosplenium glechomifolium
Plants - /ascular	Chrysosplenium glechomifolium	Pacific golden saxifrage	PDSAX07020	None	None	-	4.3	4012472	EUREKA	Unprocessed	Plants - Vascular Saxifragaceae - Chrysosplenium glechomifolium
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4012481	ARCATA NORTH	Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4012388	BLUE LAKE	Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4112411	CRANNELL	Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4112318	PANTHER CREEK	Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4012471	ARCATA SOUTH	Mapped and Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Mitellastra caulescens	leafy-stemmed mitrewort	PDSAX0N020	None	None	-	4.2	4012378	KORBEL	Mapped and Unprocessed	Plants - Vascular Saxifragaceae - Mitellastra caulescens
Plants - /ascular	Tiarella trifoliata var. trifoliata	trifoliate laceflower	PDSAX10031	None	None	-	3.2	4012378	KORBEL	Unprocessed	Plants - Vascular Saxifragaceae - Tiarella trifoliata var. trifoliata
Plants - /ascular	Tiarella trifoliata var. trifoliata	trifoliate laceflower	PDSAX10031	None	None	-	3.2	4012388	BLUE LAKE	Unprocessed	Plants - Vascular Saxifragaceae - Tiarella trifoliata var. trifoliata
Plants - /ascular	Viola palustris	alpine marsh violet	PDVIO041G0	None	None	-	2B.2	4012472	EUREKA	Mapped	Plants - Vascular Violaceae - Viola palustris
Plants - /ascular	Viola palustris	alpine marsh violet	PDVIO041G0	None	None	-	2B.2	4012471	ARCATA SOUTH	Mapped	Plants - Vascular Violaceae - Viola palustris

CNPS Rare Plant Inventory



Search Results

58 matches found. Click on scientific name for details

Search Criteria: <u>9-Quad</u> include [4112411:4112318:4012472:4012471:4012378:4012481:4012482:4012388]

	501111011							CA RARE	05115011		LOWEST	HIGHEST
▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	LIST	LIST			GENERAL HABITATS	MICROHABITATS	ELEVATION (FT)	(FT)
<u>Abronia</u> <u>umbellata var.</u> <u>breviflora</u>	pink sand- verbena	Nyctaginaceae	annual herb	Jun-Oct	None	None	S2	1B.1	Coastal dunes		0	35
<u>Angelica lucida</u>	sea-watch	Apiaceae	perennial herb	Apr-Sep	None	None	S3	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)		0	490
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun- Oct	None	None	S2	1B.2	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)		0	180
Astragalus rattanii var. rattanii	Rattan's milk- vetch	Fabaceae	perennial herb	Apr-Jul	None	None	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Gravelly, Streambanks	100	2705
<u>Calamagrostis</u> <u>bolanderi</u>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	S4	4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps (freshwater), Meadows and seeps (mesic), North Coast coniferous forest	Mesic	0	1495

/23, 7:00 AM				0141 0 11	are Plant Inventory Searc	ii i toodito				
<u>Cardamine</u> <u>angulata</u>	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar- Jul	None None S3	2B.2	Lower montane coniferous forest, North Coast coniferous forest	Streambanks	50	3000
<u>Carex arcta</u>	northern clustered sedge	Cyperaceae	perennial herb	Jun-Sep	None None S1	2B.2	Bogs and fens, North Coast coniferous forest (mesic)		195	4595
Carex leptalea	bristle-stalked sedge	Cyperaceae	perennial rhizomatous herb	Mar-Jul	None None S1	2B.2	Bogs and fens, Marshes and swamps, Meadows and seeps (mesic)		0	2295
<u>Carex lyngbyei</u>	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None None S3	2B.2	Marshes and swamps (brackish, freshwater)		0	35
<u>Carex praticola</u>	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	None None S2	2B.2	Meadows and seeps (mesic)		0	10500
<u>Castilleja</u> <u>ambigua var.</u> humboldtiensis	Humboldt Bay owl's- clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-Aug	None None S2	1B.2	Marshes and swamps (coastal salt)		0	10
<u>Castilleja</u> <u>litoralis</u>	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None None S3	2B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	50	330
<u>Chloropyron</u> <u>maritimum ssp.</u> palustre	Point Reyes salty bird's- beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None None S2	1B.2	Marshes and swamps (coastal salt)		0	35
<u>Chrysosplenium</u> <u>glechomifolium</u>	_	Saxifragaceae	perennial herb	Feb-Jun	None None S3	4.3	North Coast coniferous forest, Riparian forest	Roadsides (sometimes), Seeps (sometimes), Streambanks	35	1770
<u>Collinsia</u> <u>corymbosa</u>	round- headed collinsia	Plantaginaceae	annual herb	Apr-Jun	None None S1	1B.2	Coastal dunes		0	65
<u>Coptis laciniata</u>	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar- May(Sep- Nov)	None None S3?	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic	0	3280
Eleocharis parvula	small spikerush	Cyperaceae	perennial herb	(Apr)Jun- Aug(Sep)	None None S3	4.3	Marshes and swamps		5	9910

<u>Epilobium</u> <u>septentrionale</u>	Humboldt County fuchsia	Onagraceae	perennial herb	Jul-Sep	None	None	S4	4.3	Broadleafed upland forest, North Coast coniferous forest	Rocky (sometimes), Sandy (sometimes)	150	5905
<u>Erysimum</u> menziesii	Menzies' wallflower	Brassicaceae	perennial herb	Mar-Sep	FE	CE	S1	1B.1	Coastal dunes		0	115
<u>Erythronium</u> <u>oregonum</u>	giant fawn lily	Liliaceae	perennial herb	Mar- Jun(Jul)	None	None	S2	2B.2	Cismontane woodland, Meadows and seeps	Openings, Rocky, Serpentinite (sometimes)	330	3775
<u>Erythronium</u> <u>revolutum</u>	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar- Jul(Aug)	None	None	S3	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, Streambanks	0	5250
<u>Fissidens</u> pauperculus	minute pocket moss	Fissidentaceae	moss		None	None	S2	1B.2	North Coast coniferous forest (damp coastal soil)		35	3360
<u>Fritillaria purdyi</u>	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Serpentinite (usually)	575	7400
<u>Gilia capitata</u> <u>ssp. pacifica</u>	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	S2	1B.2	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland		15	5465
<u>Gilia</u> millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	S2	1B.2	Coastal dunes		5	100
<u>Glehnia</u> littoralis ssp. leiocarpa	American glehnia	Apiaceae	perennial herb	May-Aug	None	None	S2S3	4.2	Coastal dunes		0	65
<u>Hemizonia</u> <u>congesta ssp.</u> <u>tracyi</u>	Tracy's tarplant	Asteraceae	annual herb	(Mar- Apr)May- Oct	None	None	S4	4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest	Openings, Serpentinite (sometimes)	395	3935
<u>Hesperevax</u> <u>sparsiflora var.</u> <u>brevifolia</u>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	S3	1B.2	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie		0	705

23, 1.00 AW										
Hosackia gracilis	harlequin	Fabaceae	perennial rhizomatous herb	Mar-Jul	None None S3	4.2	Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	Roadsides	0	2295
<u>lliamna</u> <u>latibracteata</u>	California globe mallow	Malvaceae	perennial herb	Jun-Aug	None None S2	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	Burned areas (often)	195	6560
<u>Lasthenia</u> <u>californica ssp.</u> macrantha	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None None S2	1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub		15	1705
<u>Lathyrus</u> g <u>landulosus</u>	sticky pea	Fabaceae	perennial rhizomatous herb	Apr-Jun	None None S3	4.3	Cismontane woodland		985	2625
<u>Lathyrus</u> j <u>aponicus</u>	seaside pea	Fabaceae	perennial rhizomatous herb	May-Aug	None None S2	2B.1	Coastal dunes		5	100
<u>Lathyrus</u> <u>palustris</u>	marsh pea	Fabaceae	perennial herb	Mar-Aug	None None S2	2B.2	Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest	Mesic	5	330

23, 7.00 AW				CINES R	are Fiant	lilveillor	/ Searci	i Results				
<u>Layia carnosa</u>	beach layia	Asteraceae	annual herb	Mar-Jul	FT	CE	S2	1B.1	Coastal dunes, Coastal scrub (sandy)		0	195
<u>Lilium kelloggii</u>	Kellogg's lily	Liliaceae	perennial bulbiferous herb	(Feb)May- Aug	None	None	S3	4.3	Lower montane coniferous forest, North Coast coniferous forest	Openings, Roadsides	10	4265
<u>Lilium</u> occidentale	western lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	FE	CE	S1	1B.1	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)		5	605
<u>Listera cordata</u>	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	None	None	S4	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest		15	4495
<u>Lycopodium</u> <u>clavatum</u>	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun- Aug(Sep)	None	None	S3	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	Edges (often), Openings, Roadsides	150	4020
<u>Mitellastra</u> <u>caulescens</u>	leafy- stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr- Oct	None	None	S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	Mesic, Roadsides (sometimes)	15	5580
<u>Monotropa</u> uniflora	ghost-pipe	Ericaceae	perennial herb (achlorophyllous)	Jun- Aug(Sep)	None	None	S2	2B.2	Broadleafed upland forest, North Coast coniferous forest		35	1805

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Montia howellii	Howell's montia	Montiaceae	annual herb	(Feb)Mar- May	None None S2	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	Roadsides (sometimes), Vernally Mesic	0	2740
<u>Oenothera</u> <u>wolfii</u>	Wolf's evening- primrose	Onagraceae	perennial herb	May-Oct	None None S1	1B.1	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	Mesic (usually), Sandy	10	2625
<u>Packera</u> <u>bolanderi var.</u> <u>bolanderi</u>	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan- Apr)May- Jul(Aug)	None None S2S3	2B.2	Coastal scrub, North Coast coniferous forest	Roadsides (sometimes)	100	2135
<u>Piperia candida</u>	white- flowered rein orchid	Orchidaceae	perennial herb	(Mar- Apr)May- Sep	None None S3	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	Serpentinite (sometimes)	100	4300
<u>Pityopus</u> <u>californicus</u>	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar- Apr)May- Aug	None None S4	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Mesic	50	7300
<u>Pleuropogon</u> <u>refractus</u>	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Feb- Mar)Apr- Aug	None None S4	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic	0	5250
<u>Ribes</u> <u>laxiflorum</u>	trailing black currant	Grossulariaceae	perennial deciduous shrub	Mar- Jul(Aug)	None None S3	4.3	North Coast coniferous forest	Roadsides (sometimes)	15	4575

/23, 7:00 AM				CINES IX	are Plant Inventory Search	Results				
<u>Sidalcea</u> <u>malachroides</u>	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr- Aug	None None S3	4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Disturbed areas (often)	0	2395
<u>Sidalcea</u> malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar <mark>)May-</mark> Aug	None None S2	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Roadsides (often)	50	4035
<u>Sidalcea</u> <u>oregana ssp.</u> <u>eximia</u>	coast checkerbloom	Malvaceae	perennial herb	Jun-Aug	None None S1	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest		15	4395
<u>Silene scouleri</u> <u>ssp. scouleri</u>	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar- May) <mark>Jun-</mark> Aug(Sep)	None None S2S3	2B.2	Coastal bluff scrub, Coastal prairie, Valley and foothill grassland		0	1970
<u>Spergularia</u> canadensis var. occidentalis	western sand- spurrey	Caryophyllaceae	annual herb	Jun-Aug	None None S1	2B.1	Marshes and swamps (coastal salt)		0	10
<u>Sulcaria</u> <u>spiralifera</u>	twisted horsehair lichen	Parmeliaceae	fruticose lichen (epiphytic)		None None S2	1B.2	Coastal dunes (SLO Co.), North Coast coniferous forest (immediate coast)		0	295
<u>Tiarella</u> <u>trifoliata var.</u> <u>trifoliata</u>	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun- Aug	None None S2S3	3.2	Lower montane coniferous forest, North Coast coniferous forest	Edges, Streambanks	560	4920
<u>Trichodon</u> <u>cylindricus</u>	cylindrical trichodon	Ditrichaceae	moss		None None S2	2B.2	Broadleafed upland forest, Meadows and seeps, Upper montane coniferous forest	Roadsides, Sandy	165	6570

<u>Usnea</u> longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None None S4	4.2	Broadleafed upland forest, North Coast coniferous forest	165	4790
<u>Viola palustris</u>	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	None None S1S2	2B.2	Bogs and fens (coastal), Coastal scrub (mesic)	0	490

Showing 1 to 58 of 58 entries

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Wetland Delineation Report

McKinleyville Town Center Wetlands Mapping

October 19, 2023

Wetland Delineation Report McKinleyville Town Center Wetlands Mapping

This document has been prepared for:

County of Humboldt 3015 H Street Eureka, CA 95501

By:



GHD

718 Third Street
Eureka, CA 95501, United States
T +1 707 443 8326 | E misha.schwarz@ghd.com | ghd.com

October 19, 2023

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1. Summary

GHD prepared this Wetland Delineation Report and accompanying appendices on behalf of the Humboldt County (Client), in support of the proposed McKinleyville Town Center Wetlands Mapping (Project) within the community of McKinleyville, California (**Appendix A, Figure 1**). The surveys were conducted within the Project Study Boundary (PSB) as shown in **Appendix A, Figure 2**. GHD conducted the wetland delineation fieldwork on May 30, May 31, and August 2, 2023. United States Army Corps of Engineers (USACE) three-parameter wetlands were mapped based on wetland indicative vegetation, hydric soils, and wetland hydrology. In addition to USACE three-parameter wetlands, one and two-parameter wetlands were mapped per the wetland definition provided in the McKinleyville Community Plan, 2002. One-parameter wetlands qualifying as potential Sensitive Natural Communities (SNC)s recognized by the California Department of Fish and Wildlife (CDFW) were also noted for the purposes of this report.

The wetland delineation identified two three-parameter wetlands, comprising a total of 0.08 acres, which are artificially created and regularly maintained stormwater detention facilities on APN 508-251-061 and are likely not jurisdictional to the USACE, RWQCB, or McKinleyville Community Plan. Additionally, the PSB contains four one-parameter wetlands on APN 510-132-031, comprising a total of 0.62 acres, that may be regulated by the McKinleyville Community Plan. With regard to SNCs 0.41 acres of the 0.62 acres of one-parameter wetlands are also potential SNCs. Other waters such as rivers, streams, and lakes were not observed within the PSB. Please see **Appendix A**, **Figure 3**, for a map detailing sample point locations and identified wetland areas.

2. Introduction

On behalf of the County of Humboldt, GHD prepared this Wetland Delineation Report and accompanying appendices, in support of the McKinleyville Town Center Wetlands Mapping Project (Project) in McKinleyville, Humboldt County, CA. This report provides an investigation into whether wetlands and/or other aquatic resources are present within the Project Study Boundary (PSB), and can support future environmental documentation, permitting, and construction planning for the Project as deemed appropriate. This report is subject to, and must be read in conjunction with, the limitations set out in Section 6, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

2.1 Site Location and Project Description

The Project included mapping all wetlands within the McKinleyville Town Center as defined by either the USACE Wetland Delineation Manual and Regional Supplements and/or the McKinleyville Community Plan. The Project site located within Section 6, Township 06 North, Range 01 East, and Section 31, Township 07 North, Range 01 East, Arcata North USGS 7.5 Minute Quadrangle, in Humboldt County, California (Appendix A, Figure 1). The PSB is comprised of approximately 50.11 acres and includes all relevant portions of Assessor Parcel Numbers (APNs) detailed below in Table 2-1 within the McKinleyville Town Center in McKinleyville, California (Appendix A, Figure 2).

Table 2-1: Wetland Types Delineated for this Study by APN.

Assessor's Parcel Number	APN Total Acreage (*survey area does not include entire area for	1-Parameter Wetland	3-Parameter Wetland
(APN)	some APNs)	Delineation	Delineation
510-132-031	57.46	X	N/A
510-132-015	0.3	X	X
510-132-032	0.85	X	X
510-341-019	1.85	No Access	No Access
510-341-015	1.19	No Access	No Access
510-122-022	0.09	x	X
508-251-061	1.52	х	X
510-132-017	0.26	x	x

The PSB consists of the eight APNs detailed above and includes undeveloped and/or partially developed portions the McKinleyville Town Center that contain scattered forest, pastureland, open space, and/or other vegetated areas. Sample points were not taken for one-parameter or three-parameter wetlands as part of this study APNs 510-341-019 and 510-341-015 due to access restraints. One-parameter and/or three-parameter wetlands on APNs 510-341-019 and 510-341-015 are unlikely based on visual assessments from the public right of way. APN 510-132-031 was investigated for one-parameter wetlands only as a part of this study as a three-parameter wetland delineation for this parcel had been previously conducted by GHD in 2021 as detailed in the L&A Enterprises Project Aquatic Resources Delineation Report (GHD 2021).

2.2 Regulatory Background

2.2.1 Federal

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 230.3 states the following:

The term waters of the United States are defined as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;

- (4) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (5) Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
- (6) The territorial sea;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. (40 CFR § 230.3).

Wetlands Definition

40 CFR § 230.3 continues and defines, "(t) The term wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas" (40 CFR § 230.3).

Wetland Delineation Manual

The 1987 USACE Wetland Delineation Manual provides guidelines and methods to determine whether an area is a wetland subject to federal regulation under Section 404 of the Clean Water Act. The manual specifies that wetland hydrology, soil, and vegetation indicators must be present to identify a wetland (USACE 1987, p. 10). In addition, the Wetlands Delineation Manual states, "If hydrophytic vegetation is being maintained only because of man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE, 1987).

Federal Geographic Data Committee (FGDC) Wetland Classification Standard

The Classification of Wetlands and Deepwater Habitats of the United States (FGDC, 2013) provides a nationally standardized hierarchical system for classifying wetland and deepwater habitats based on Cowardin et al. (1979). The National Wetland Inventory (NWI), a publicly available resource that provides information on the distribution of wetlands in the U.S., classifies wetlands according to the FDGC standard. The FDGC classification is based on a definition of wetlands with at least one of the three wetland attributes: predominantly hydrophytic vegetation, predominantly hydric soil, and hydrology. However, they state that all available information should be used, and all three attributes should be considered if they are present (FGDC, 2013).

2.2.2 State

The State Water Resources Control Board's (SWRCB) April 2019 Procedures for Discharges of Dredged or Fill Material to Waters of the State says the following:

An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:

- 1. Natural wetlands,
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands that meet any of the following criteria:
 - a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
 - b. Specifically identified in a water quality control plan as a wetland or other water of the state:
 - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
 - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,
 - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
 - iv. Treatment of surface waters,
 - v. Agricultural crop irrigation or stock watering,
 - vi. Fire suppression,
 - vii. Industrial processing or cooling,
 - viii. Active surface mining even if the site is managed for interim wetlands functions and values,
 - ix. Log storage,
 - x. Treatment, storage, or distribution of recycled water, or
 - xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
 - xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state" (SWRCB, 2019).

The February 2020 Draft Guidance State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State further clarifies as follows:

Human activity can cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural

landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities, and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area. such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the construction of the artificial wetlands would be too recent to be deemed "historic" and the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape" (SWRCB, 2020).

The RWQCB carry out and regionally regulate the SWRCB's definition of Waters of the State.

2.2.3 McKinleyville Community Plan

The McKinleyville Community Plan (2002, updated 2017) section 3422 defines wetland areas using a one-parameter definition as follows (p. 49):

Item 7. Wetland Areas shall be defined according to the criteria utilized by the CA Dept. of Fish and Game (also included in the County's Open Space Implementation Standards). In summary, the definition requires that a given area satisfy at least one of the following three criteria:

- The presence of at least periodic predominance of hydrophytic vegetation; or.
- predominately hydric soils; or,
- periodic inundation for seven (7) consecutive days.

Item 12. For purposes of these requirements, wetlands and wetland buffer standards shall not apply to watercourses consisting entirely of a drainage ditch, or other man-made drainage device, construction or system.

For this study "one-parameter wetlands" are areas that meet the definition of wetlands under the McKinleyville Community Plan detailed above.

2.2.4 Sensitive Natural Communities

California Department of Fish and Wildlife (CDFW) has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (Fish & G. Code, § 1802). CDFW, as trustee agency under CEQA Guidelines section 15386, provides expertise in reviewing and commenting on environmental documents and provides protocols regarding potential negative impacts to those resources held in trust for the people of California.

CDFW maintains a list of Sensitive Natural Communities (SNC's) that must be considered during the CEQA process (CDFW 2023). SNC's include those that are tracked in the California Natural Diversity Database (CNDDB) as well as *A Manual of California Vegetation Second Edition* (MCV2) alliances or associations with NatureServe State Ranks of S1 to S3. Sources for assessing SNC's *include Preliminary Descriptions of the*

Terrestrial Natural Communities of California (Holland 1986), List of Vegetation Alliances (CDFW 2023), and A Manual of California Vegetation Online Edition (CNPS 2023b).

3. Methodology

3.1 Wetland Delineation Approach

GHD senior wetland scientist, Misha Schwarz, conducted reconnaissance site visits (as viewed from public roads) on February 4 and February 5, 2023 to identify areas within the McKinleyville Town Center that had potentially unmapped one and three-parameter wetlands (excluding the Life Plan Humboldt property). GHD wetland scientists, Miles Hartnett and Christian Hernandez, conducted a wetland delineation within the identified areas on May 30, May 31, and August 2, 2023.

To define a wetland, the USACE requires that vegetation, soil, and hydrology (three-parameters) all show wetland attributes (USACE 1987; USACE 2010). The wetland delineation used USACE criteria from the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0) (USACE 2010). Areas outside of three-parameter wetlands that met one or two parameters were designated as one-parameter wetlands per the McKinleyville Community Plan definition of wetlands described in **Section 2.2.3**. The current standard field forms provided by the USACE (2010) were used to collect vegetation, soils, and hydrology data (**Appendix B, USACE Wetland Determination Data Forms**).

Wetland/upland boundaries and sample points were mapped in the field with an Eos Arrow 100 GNSS (submeter-accuracy) GPS and an iPad running ArcGIS Collector software. Wetland/upland boundaries and sample points were recorded with the GPS unit to map the wetland's spatial extent. The boundary points were connected in the office using ArcMap Pro software for figure creation and the boundaries were clipped to the extent of the PSB.

Each wetland area was designated with a numbered polygon (e.g., W1, W2, etc.). Each sample point was designated with their respective wetland/upland determination label (e.g., 1-W, 2-U, etc.). Sample points were collected in wetland and upland areas to confirm and document the presence/absence of wetland indicators (soils, hydrology, and vegetation). One-parameter wetland polygons that were also determined to be potential SNCs were noted for the purposes of this study. **Appendix B** contains all datasheets recorded during the delineation.

3.2 Botanical Methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer within a standard-sized plot determined by the strata layer. Nomenclature follows *The Jepson Manual* (Baldwin et al. 2012), which was cross-checked to federal standard nomenclature to identify the indicator status. The species' wetland indicator status for the Western Mountains, Valleys, and Coast Region was denoted in the respective column, using the standard reference: USACE 2020 *National Wetland Plant List* (USACE 2020). This list classifies species based on the probability that they are found in wetlands as follows:

- Obligate (OBL): almost always in wetlands
- Facultative Wetland (FACW): usually occurring in wetlands
- Facultative (FAC): commonly occurring in wetlands and uplands

- Facultative Upland (FACU): usually occurring in uplands
- Upland (UPL): upland obligate, rarely in wetlands

Species that do not appear on the list are generally assumed to be in the upland category (USACE 2010). Standard procedures for documenting hydrophytic vegetation indicators were used per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010). **Appendix C** contains a list of all species observed and recorded within sample plots throughout the delineation.

Areas that had potential for false-positive indicators of hydrophytic vegetation (i.e. areas dominated by invasive and/or aggressive FAC species and/or areas with FAC tree species in the overstory, where wetland hydrology and hydric soil were not present) were further analyzed using the prevalence index, a weighted metric of all dominant and non-dominant species present. A prevalence index score greater than 3.0, where indicators of wetland soil and hydrology are not present, are indicative of upland vegetation. The sample points at locations that passed the dominance test with a prevalence of FAC species, did not pass the prevalence index test, and were not accompanied by indicators of wetland hydrology or hydric soils were not determined to consist of hydrophytic vegetation for the purposes of determining one-parameter wetlands under the McKinleyville Community Plan.

3.3 Soils Methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018 version 8.2). Soil pits were dug to an approximate depth of 18 inches or to the depth otherwise required to confirm hydric soil indicators. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 that are indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2018). Soil pits were not dug at some sample points on APN 510-132-031 in areas where soils and hydrology had been sufficiently assessed in L&A Enterprises Project Aquatic Resources Delineation Report (GHD 2021).

The Munsell Soil Color Book (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with Field Indicators of Hydric Soils in the United States (Version 8.2, 2018).

3.3.1 Existing Soils Information

The NRCS identifies two main soil units within the PSB (**Appendix A, Figure 4**). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2023). Although NRCS soil mapping is informative, the scale is generally too broad to definitively accurately characterize potential wetlands/uplands boundaries.

Soil map units identified by NRCS within the PSB include Soil Map Unit 145: Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes, Soil Map Unit 225: Arcata and Candymountain soils, 0 to 2 percent slopes, and Soil Map Unit 226: Arcata and Candymountain soils, 2 to 9 percent slopes These soil map units are described below:

Soil Map Unit 145: Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes.

The map unit composition is as follows: 35 percent Halfbluff and similar soils, 30 percent Tepona and similar soils, 25 percent Urban Land, and 10 percent minor components. The Halfbluff-Tepona soil type setting includes marine terraces, backslopes or tread of marine deposits derived from sedimentary rock parent material. The Urban Land soil setting includes alluvial fans.

The Halfbluff soil series is classified as an Oxyaquic Humudepts. The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is moderate, or about 7.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is 1, and non-irrigated land capability classification is 2s. The hydrologic soil group is C. The soil series unit is inherently not hydric.

The Tepona soil series is classified as an Oxyaquic Humudepts, The depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is high, or about 9.4 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 2s. The hydrologic soil group is C. The soil series unit is inherently not hydric.

For the Urban Land portion of the soil complex, depth to a restrictive, drainage classes and frequency of ponding or flooding is not stated. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 8. The hydrologic soil group is not stated. The soil series unit is not considered hydric.

The descriptions of the minor components are as follows: five percent Talawa (considered hydric), three percent Tillas (not considered hydric), and two percent Hookton (not considered hydric).

Soil Map Unit 225-226: Arcata and Candymountain soils, 0 to 2 and 2 to 9 percent slopes

The map unit composition is as follows: 50 percent Arcata and similar soils, 35 percent Candymountain and similar soils, and 15 percent minor components. The Arcata and Candymountain soil setting includes marine terraces, backslopes or tread of marine deposits derived from mixed sources of parent material.

The Arcata soil series is classified as a Pachic Humudepts. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is 1 and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

The Candymountain soil series is classified as a Typic Humudept. The depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

The descriptions of the minor components, which are mostly inherently not hydric except for the Talawa soil series, are as follows: four percent Urban land, three percent Timmons, three percent Halfbluff, three percent Megwil, and two percent Talawa.

Please refer to **Appendix E**, **NRCS Custom Soil Resources Report**, for further details on mapped soil units within the PSB.

3.4 Precipitation and Hydrology

Precipitation was within normal thresholds according to the NOAA Regional Climate Center WETS tables at the time fieldwork was conducted. A WETS table showing climatic data for the Arcata Eureka Airport, CA, Station is provided in **Appendix F, NOAA Regional Climate Center WETS Table** (NOAA 2023). Aerial imagery and the National Wetland Inventory (NWI) Mapper were referenced before conducting fieldwork (**Appendix A, Figure 5**) (NWI 2023). The closest stream or water body is Widow White Creek, approximately 2,050 feet north of the PSB. The PSB is located outside of the 100-year flood zone according to the FEMA National Flood Hazard Layer (NFHL) (**Appendix A, Figure 6**) (FEMA 2023). Wetland hydrology indicators, such as drainage patterns, material deposits, soil saturation, high water table, or surface water presence, were recorded in the field. Subsurface hydrology indicators were not investigated at some sample points on APN 510-132-031 in areas where soils and hydrology had been sufficiently assessed in L&A Enterprises Project Aquatic Resources Delineation Report (GHD 2021).

3.5 One-parameter Wetlands and Sensitive Natural Communities

One-parameter wetland areas that could also qualify as Sensitive Natural Communities (SNC's) listed on the California Department of Fish and Wildlife (CDFW) 2023 Sensitive Natural Communities List (CDFW 2023) were noted for the purposes of this report. Seasonally appropriate protocol level botanical studies, which typically include identification and mapping of SNCs, have not been conducted within the PSB at the time of this report.

4. Results

The PSB contains two three-parameter wetlands, comprising of 0.08 acres, which are artificially created and regularly maintained stormwater detention facilities on APN 508-251-061 and are likely not jurisdictional to the USACE, RWQCB jurisdictional and/or McKinleyville Community Plan. Additionally, the PSB contains four one-parameter wetlands on APN 510-132-031, comprising a total of 0.62 acres, that may be regulated by the McKinleyville Community Plan. With regard to SNCs, 0.41 acres of the 0.62 acres of one-parameter wetlands are also potential SNCs. Details of each wetland and upland area investigated are discussed in the following subsections of this report. The total acreage of identified wetlands within the PSB are detailed below in **Table 4-1**.

Table 4-1. Wetland Areas Identified Within the PSB

Wetland ID	Wetland Type	Potential SNC (Y/N)	Area (acres)	APN	Coordinates (lat/long)
Wetland 1 (W1)	Three-parameter (Stormwater facility)	N	0.02	508-251-061	40.940907/-124.102534

Wetland ID	Wetland Type	Potential SNC (Y/N)	Area (acres)	APN	Coordinates (lat/long)
Wetland 2 (W2)	Three-parameter (Stormwater facility)	N	0.06	508-251-061	40.940715/-124.102567
Wetland 3 (W3)	One-parameter	Υ	0.36	510-132-031	40.942528/-124.104277
Wetland 4 (W4)	One-parameter	Υ	0.05	510-132-031	40.943697/-124.109315
Wetland 5 (W5)	One-parameter	N	0.15	510-132-031	40.944031/-124.106622
Wetland 6 (W6)	One-Parameter	N	0.06	510-132-031	40.943581/-124.106592
Totals	Area (acres)				
Three-Parameter Wetlands	0.08				
One-Parameter Wetlands	0.62				
One-Parameter Wetlands also Potential SNCs	0.41				

Please see **Appendix A, Figure 3** for a map of sample point locations and delineated wetlands within the PSB. **Appendix B, USACE Wetland Determination Data Forms**, contains further details regarding data collected at each sample point location.

4.1 Three-Parameter Wetlands

Two three-parameter wetlands were mapped within the PSB. Wetland 1 (W1) and Wetland 2 (W2) are both artificially created stormwater detention basins associated with development on APN 508-251-061 and are described below.

Wetland 1 (W1)

Wetland 1 is an artificially created and regularly maintained stormwater detention basin totaling 0.02 acres and is not likely jurisdictional to the USACE, RWQCB, or McKinleyville Community Plan (**Appendix D**, **Photo 1**). Historical imagery accessed through Google Earth Pro shows earthwork for the stormwater basin being completed in 2019. Wetland 1 is an artificial wetland less than one acre in size and does not satisfy the criteria for Waters of The State set forth in sections 2, 3.a, 3.b, or 3.c of the SWRCB *Procedures for Discharges of Dredged or Fill Material into Waters of The State* (SWRCB 2019). Wetland 1 is not hydrologically connected by surface flows to any other waters.

Dominant vegetation within Wetland 1 consisted primarily of meadow barley (*Hordeum brachyantherum*, FACW). Sample points within Wetland 1 passed the dominance test and prevalence index for hydrophytic vegetation.

Soils within Wetland 1 were disturbed and showed evidence of excavation, mixing, and compaction with most of the topsoil likely removed or altered during excavation. The existing soils consisted of silt loams with a 10YR 3/2 compacted upper horizon from 0-4 inches with 2% 5YR 5/8 redoximorphic features in the matrix. The upper horizon was underlain by a 2.5Y 6/4 horizon from 4-12 inches with 15% 10YR 6/8 redoximorphic features in the matrix. Sample points within Wetland 1 met hydric soil indicator Redox Dark Surface (F6).

Observations of wetland hydrology within Wetland 1 included evidence of recent inundation as well as landscape and vegetation characteristics that indicate contemporary wet conditions. Sample points within Wetland 1 met primary wetland hydrology indicator Algal Mat or Crust (B4), as well as secondary indicators Geomorphic Position (D2) and FAC-Neutral Test (D5). Surface water, groundwater, and soil saturation were not observed at sample points within Wetland 1.

Wetland 2 (W2)

Wetland 2 is an artificially created and regularly maintained stormwater detention basin totaling 0.06 acres and is not likely jurisdictional to the USACE, RWQCB, or McKinleyville Community Plan (**Appendix D**, **Photo 2**). Wetland 2 is slightly higher in elevation than Wetland 1 and has a rocked outflow to Wetland 1. These two wetland features were likely created at the same time and historical imagery accessed through Google Earth Pro shows earthwork for the stormwater basins being completed in 2019. Wetland 2 is an artificial wetland less than one acre in size and does not satisfy the criteria for Waters of The State set forth in sections 2, 3.a, 3.b, or 3.c of the SWRCB *Procedures for Discharges of Dredged or Fill Material into Waters of The State* (SWRCB 2019). Wetland 2 is not hydrologically connected by surface flows to any other waters.

Dominant vegetation within Wetland 2 consisted primarily of meadow barley (*Hordeum brachyantherum*, FACW), reed fescue (*Festuca arundinacea*, FAC), Italian rye grass (Festuca perennis, FAC), and hairy cat's ear (*Hypochaeris radicata*, FACU). Sample points within Wetland 2 passed the dominance test and prevalence index for hydrophytic vegetation.

Soils within Wetland 2 were disturbed and showed evidence of excavation, mixing, and compaction with most of the topsoil likely removed or altered during excavation. The existing soils consisted of silt loams with a 10YR 3/1 compacted upper horizon from 0-4 inches with 5% 5YR 5/8 redoximorphic features in the matrix. The upper horizon was underlain by a 2.5Y 5/4 horizon from 4-10 inches with 20% 10YR 5/8 redoximorphic features in the matrix. Sample points within Wetland 2 met hydric soil indicator Redox Dark Surface (F6).

Observations of wetland hydrology within Wetland 2 included evidence of recent inundation as well as landscape and vegetation characteristics that indicate contemporary wet conditions. Sample points within Wetland 6 met primary wetland hydrology indicator Algal Mat or Crust (B4), as well as secondary indicator Geomorphic Position (D2). Surface water, groundwater, and soil saturation were not observed at sample points within Wetland 6.

Sample points were taken within each three-parameter wetland area identified within the PSB. Three-parameter wetland sample points are detailed below in **Table 4-2**:

Table 4-2. Three-Parameter Wetland Sampling Points within the PSB

Sample Point ID	Wetland ID	Dominance Test	Prevalence Index	Hydrophytic Vegetation (Y/N)	Hydric Soil (Y/N)	Wetland Hydrology (Y/N)	Coordinates (lat/long)
127-w	W1: 3- Parameter (Stormwater Facility)	Pass	Pass (2.16)	Y	Y	Y	40.940911/- 124.102562
129-w	W2: 3- Parameter (Stormwater Facility)	Pass	Pass (2.31)	Y	Y	Y	40.940716/- 124.102567

Please see **Appendix A, Figure 3** for a map of sample point locations and delineated wetlands within the PSB. **Appendix B, USACE Wetland Determination Data Forms**, contains further details regarding data collected at each sample point location.

4.2 One-Parameter Wetlands and Potential SNCs

Four separate one-parameter wetlands were mapped within the PSB. Wetland 3 (W3) through Wetland 6 (W6) do not meet the definition to wetlands under the USACE or RWQCB but do meet the definition of wetlands under the McKinleyville Community Plan. These areas showed indications of wetland vegetation, wetland soils, and/or wetland hydrology, but lacked the indicators necessary to meet all three wetland parameters. Sample points that met one or two wetland parameters were classified and mapped as one-parameter wetlands for the purposes and regulatory framework guiding this study. One-parameter wetland areas that could also qualify as SNCs were also noted for the purposes of this report. Three-parameter wetlands on APN 510-132-031 were assessed in L&A Enterprises Project Aquatic Resources Delineation Report (GHD 2021).

Wetland 3 (W3)

Wetland 3 met one wetland parameter, is comprised of 0.36 acres, and is adjacent to a previously mapped three-parameter wetland on APN 510-132-031 (GHD 2021) (**Appendix D, Photo 3**). There was evidence of mixed soil horizons in Wetland 3 indicating some level of grading, mechanical disturbance, or excavation. Wetland 3 is a potential willow SNC.

Dominant vegetation within Wetland 3 consisted primarily of coastal willow (*Salix hookeriana*, FACW), Sitka willow (*Salix sitchensis*, FACW), creeping buttercup (*Ranunculus repens*, FAC), common velvetgrass (*Holcus lanatus*, FAC), and sweet vernal grass (*Anthoxanthum odoratum*, FACU). Sample points within Wetland 3 passed the dominance test and prevalence index for hydrophytic vegetation.

Soils within Wetland 3 showed some signs of earthwork, disturbance and/or the mixing of horizons. Observed soils consisted of silt loams with a 10YR 3/2 upper horizon from 0-8 inches and no visible redoximorphic features underlain by a potentially buried or mixed 10YR 5/6 horizon from 8-12 inches with 7% 7.5YR 5/8 redoximorphic features in the matrix and a 10YR 2/2 horizon from 12-23 inches with no visible redoximorphic features. Sample points within Wetland 3 did not meet any hydric soil indicators.

There were no observations of wetland hydrology indicators within Wetland 3. Surface water, groundwater, and soil saturation were not observed.

Wetland 4 (W4)

Wetland 4 met one wetland parameter, is comprised of 0.05 acres, and is adjacent to a previously mapped three-parameter wetland on 510-132-031 (GHD 2021) (**Appendix D, Photo 4**). Sample points within Wetland 4 included vegetation plots and surface level observations of hydrology. Soil pits were not dug within sample points at Wetland 4. Wetland 4 is a potential willow SNC.

Dominant vegetation within Wetland 4 consisted primarily of coastal willow (*Salix hookeriana*, FACW), Rose spirea (*Spirea douglasii*, FACW), common velvetgrass (*Holcus lanatus*, FAC), and sweet vernal grass (*Anthoxanthum odoratum*, FACU). Sample points within Wetland 4 passed the dominance test and prevalence index for hydrophytic vegetation.

There were no observations of surface water or other surface level indicators of wetland hydrology.

Wetland 5 (W5)

Wetland 5 met one wetland parameter, is comprised of 0.15 acres, and is adjacent to a previously mapped three-parameter wetland on 510-132-031 (GHD 2021) (**Appendix D, Photo 5**).

Dominant vegetation within Wetland 5 consisted primarily of creeping buttercup (*Ranunculus repens*, FAC), and common velvetgrass (*Holcus lanatus*, FAC). Sample points within Wetland 5 passed the dominance test and prevalence index for hydrophytic vegetation.

Soils within Wetland 5 consisted of silt loams with a 10YR 3/1 upper horizon from 0-5 inches and no visible redoximorphic features underlain by a 10YR 3/2 horizon from 5-14 inches with no visible redoximorphic features. Sample points within Wetland 5 did not meet any hydric soil indicators.

There were no observations of wetland hydrology indicators within Wetland 5. Surface water, groundwater, and soil saturation were not observed.

Wetland 6 (W6)

Wetland 6 met one wetland parameter, is comprised of 0.06 acres, and is adjacent to a previously mapped three-parameter wetland on 510-132-031 (GHD 2021) (**Appendix D, Photo 6**). Sample points within Wetland 6 included vegetation plots and surface level observations of hydrology. Soil pits were not dug within sample points at Wetland 6.

Dominant vegetation within Wetland 6 consisted primarily of common velvetgrass (*Holcus lanatus*, FAC), sweet vernal grass (*Anthoxanthum odoratum*, FACU), California golden eyed grass (*Sisyrinchium californicum*, FACW), and common toad rush (*Juncus bufonius*, FACW). Sample points within Wetland 6 passed the dominance test and prevalence index for hydrophytic vegetation.

There were no observations of surface water or other surface level primary indicators of wetland hydrology. Wetland 6 met one secondary indicator for wetland hydrology, FAC-Neutral Test (D5).

Sample points were taken within each one-parameter wetland area identified within the PSB. One-parameter wetland sample points are detailed below in **Table 4-3**:

Table 4-3. One-Parameter Wetland Sampling Points within the PSB

Sample Point ID	Wetland ID/ Type	Dominance Test (Pass/Fail)	Prevalence Index (Pass/Fail)	Hydrophytic Vegetation (Y/N)	Hydric Soil ¹ (Y/N)	Wetland Hydrology ¹ (Y/N)	Coordinates (lat/long)
100-w	W3: 1-Parameter	Pass	Pass (3.0)	Y	N	N	40.942515/- 124.104384
111-w	W4: 1-Parameter	Pass	Pass (2.96)	Y	-	-	40.943697/- 124.109342
121-w	W5: 1-Parameter	Pass	Pass (2.93)	Y	N	N	40.944093/- 124.106565
122-w	W5: 1-Parameter	Pass	Pass (2.80)	Y	-	-	40.943969/- 124.106755
124-w	W6: 1-Parameter	Pass	Pass (2.72)	Y	-	-	40.943522/- 124.106592
126-w	W3: 1-Parameter	Pass	Pass (2.71)	Y	-	-	40.942849/- 124.104548

Footnotes:

^{1. (-)} indicates sample points on APN 510-132-031 where soils and hydrology were not assessed.

Please see **Appendix A, Figure 3** for a map of sample point locations and delineated wetlands within the PSB. **Appendix B, USACE Wetland Determination Data Forms**, contains further details regarding data collected at each sample point location.

4.3 Uplands

Twenty-four upland sampling points were collected at intuitive and strategic locations throughout the PSB to characterize the nature and extent of upland areas present (**Appendix A**, **Figure 3**; **Appendix D**, **Photo 6-19**). Areas in close proximity to waters and wetlands, depressional areas, and areas where potential hydrophytes were observed were investigated for wetland indicators. Sample points taken in upland areas did not meet the requirements necessary to satisfy any one of the three parameters for wetland determination.

Dominant vegetation in upland areas were typically comprised of sweet vernal grass (*Anthoxanthum odoratum*, FACU), common velvetgrass (*Holcus lanatus*, FAC), reed fescue (*Festuca arundinacea*, FAC), creeping buttercup (*Ranunculus repens*, FAC), California blackberry (*Rubus ursinus*, FACU), Scotch broom (*Cytisus scoparius*, UPL), coastal willow (*Salix hookeriana*, FACW), red alder (*Alnus rubra*, FAC), Sitka spruce (*Picea sitchensis*, FAC), and/or shore pine (*Pinus contorta ssp. contorta*, FAC). Soils in upland areas were typically comprised of 10YR 3/3 horizons in the upper substrate (0-12 inches) with no visible redoximorphic features in the matrix and/or pore linings. Soils in upland areas in closer proximity to wetland typically had darker 10YR 3/2 horizons in the upper substrate (0-12 inches) with no visible redoximorphic features in the matrix and/or pore linings and did not meet any hydric soil indicators. Wetland hydrology indicators including surface water, ground water and saturation within 12 inches of the soil surface were not observed at any upland sample point.

Four upland sample points (101-u,104-u,120-u, and 128-u) passed the dominance test for hydrophytic vegetation but failed the prevalence index, a weighted metric of total coverage of all dominant and non-dominant species present. The lack of wetland hydrology and hydric soil at these sample points in addition to the prevalence of upland vegetation suggests that these areas do not represent a predominance of hydrophytic vegetation but are rather being dominated by aggressive FAC species unassociated with wetland hydrology and are producing a false-positive indicator for hydrophytic vegetation by passing the dominance test in some cases. The sample points at these locations were not determined to consist of hydrophytic vegetation for the purposes of determining one-parameter wetlands under the McKinleyville Community Plan.

Upland sample points are detailed below in **Table 4-4**:

Table 4-4 Upland Sampling Points within the PSB

Sample Point ID	Туре	Dominance Test (Pass/Fail)	Prevalence Index (Pass/Fail)	Hydrophytic Vegetation (Y/N)	Hydric Soil ¹ (Y/N)	Wetland Hydrology ¹ (Y/N)	Coordinates (lat/long)
101-u	Upland	Pass	Fail (3.34)	N	N	N	40.943298/- 124.105157
102-u	Upland	Fail	Fail (3.80)	N	-	-	40.942820/- 124.107773

Sample Point ID	Туре	Dominance Test (Pass/Fail)	Prevalence Index (Pass/Fail)	Hydrophytic Vegetation (Y/N)	Hydric Soil ¹ (Y/N)	Wetland Hydrology ¹ (Y/N)	Coordinates (lat/long)
103-u	Upland	Fail	Fail (3.54)	N	-	-	40.942480/- 124.105190
104-u	Upland	Pass	Fail (3.24)	N	-	-	40.942606/- 124.109109
106-u	Upland	Fail	Fail (3.78)	N	-	-	40.942132/- 124.110240
107-u	Upland	Fail	Fail (3.09)	N	N	N	40.943107/- 124.109236
108-u	Upland	Fail	Fail (4.15)	N	-	-	40.942765/- 124.109910
109-u	Upland	Fail	Fail (3.85)	N	-	-	40.943607/- 124.110190
110-u	Upland	Fail	Fail (4.74)	N	N	N	40.943919/- 124.109601
112-u	Upland	Fail	Fail (3.64)	N	N	N	40.943910/- 124.108171
113-u	Upland	Fail	Fail (3.50)	N	-	-	40.944604/- 124.101576
114-u	Upland	Fail	Fail (3.76)	N	N	N	40.943953/- 124.107255
115-u	Upland	Fail	Fail (3.43)	N	-	-	40.944724/- 124.107060
116-u	Upland	Fail	Fail (3.93)	N	N	N	40.944810/- 124.105960
117-u	Upland	Fail	Fail (3.77)	N	-	-	40.944522/- 124.104995
118-u	Upland	Fail	Fail (3.76)	N	N	N	40.944799/- 124.103648
119-u	Upland	Fail	Fail (3.88)	N	-	-	40.943779/- 124.104443
120-u	Upland	Pass	Fail (3.10)	N	N	N	40.944168/- 124.105953
123-u	Upland	Fail	Fail (3.52)	N	-	-	40.943545/- 124.106330
125-u	Upland	Fail	Fail (3.57)	N	-	-	40.943340/- 124.105809
128-u	Upland	Pass	Fail (3.46)	N	N	N	40.940807/- 124.102504
130-u	Upland	Fail	Fail (3.79)	N	N	N	40.940586/- 124.102481

Sample Point ID	Туре	Dominance Test (Pass/Fail)	Prevalence Index (Pass/Fail)	Hydrophytic Vegetation (Y/N)	Hydric Soil ¹ (Y/N)	Wetland Hydrology ¹ (Y/N)	Coordinates (lat/long)
131-u	Upland	Fail	Fail (3.53)	N	N	N	40.945204/- 124.102190
132-u	Upland	Fail	Fail (3.57)	N	N	N	40.945238/- 124.101806

Footnotes:

Please see **Appendix A, Figure 3** for a map of sample point locations and delineated wetlands within the PSB. **Appendix B, USACE Wetland Determination Data Forms**, contains further details regarding data collected at each sample point location.

4.4 Other Waters, Streams, and Lakes

Other waters such as rivers, streams, and lakes were not observed within the PSB.

5. Conclusions

The wetland delineation prepared for the County of Humboldt, conducted on undeveloped or partially developed parcels within the McKinleyville Town Center, determined the extent of three-parameter wetlands and/or one-parameter wetlands within the PSB based on hydrophytic vegetation, hydric soils, and wetland hydrology using methods and indicators outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)* (USACE 2010). One-parameter wetlands that qualified as SNCs were also noted for the purposes of the report.

Three-parameter wetlands investigated within the PSB totaled 0.08 acres and were entirely comprised of small artificially created, and regularly maintained, stormwater detention facilities on APN 508-251-061 and are likely not jurisdictional to the USACE, RWQCB jurisdictional or McKinleyville Community Plan. One-parameter wetlands mapped within the PSB totaled 0.62 acres and are likely regulated under Section 3422 of the McKinleyville Community Plan. With regard to SNCs 0.41 acres of 0.62 acres of one-parameter wetlands are also potential SNCs. Other waters such as rivers, streams, and lakes, were not observed within the PSB.

A map of all sample point locations and delineated wetlands within the PSB is included in **Appendix A**, **Figure 3**. USACE Wetland Determination Data Forms detailing all data collected at sample point locations is provided in **Appendix B**.

^{1. (-)} indicates sample points on APN 510-132-031 where soils and hydrology were not assessed.

6. Special Terms and Conditions

6.1 Purpose of this Report

GHD prepared this report for the Client, and the Client may only use and rely on this report for the purpose agreed upon between GHD and the Client, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than the Client arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

6.2 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE jurisdictional approval letter is required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place on in 2023.

The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points. Conditions at other locations of the site may be different from the conditions found at the specific sample point.

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Resources Conservation Service (NRCS) in cooperation with the National Technical Committee for Hydric Soils.

8. Report Preparers

8.1 Client

County of Humboldt, 3015 H Street, Eureka, CA 95501

8.2 GHD

This report was prepared by the following GHD staff:

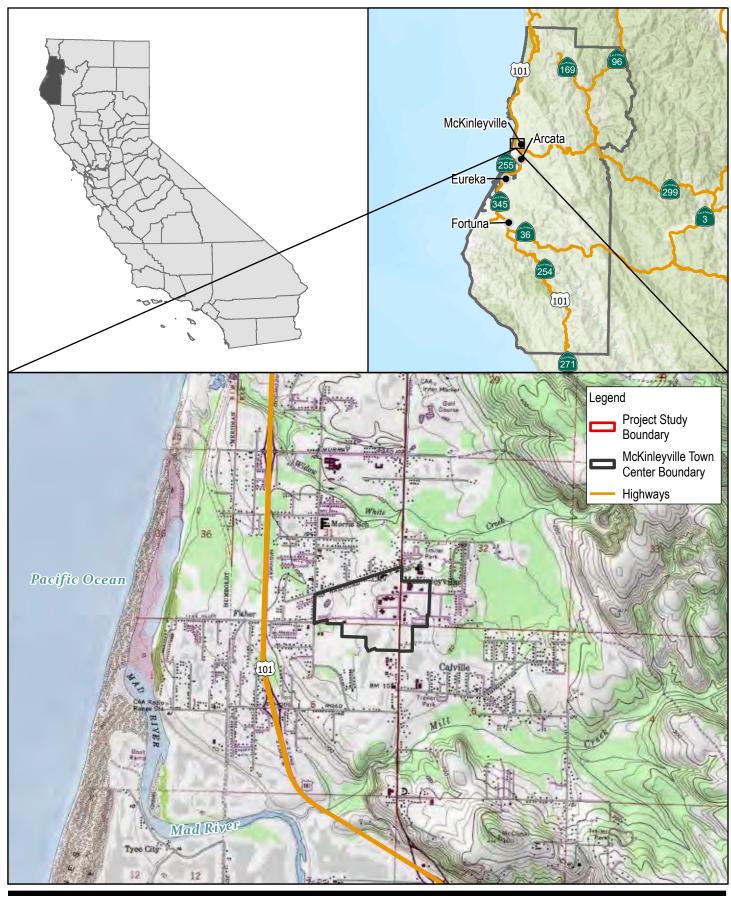
Miles Hartnett, Biologist/Wetland Scientist – Primary Author

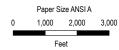
Christian Hernandez, Botanist - Contributor

Zach Porteous, GIS Specialist - Maps and Figures

Misha Schwarz, Senior Wetland Scientist – Project Manager, Reviewer

Appendix A Figures



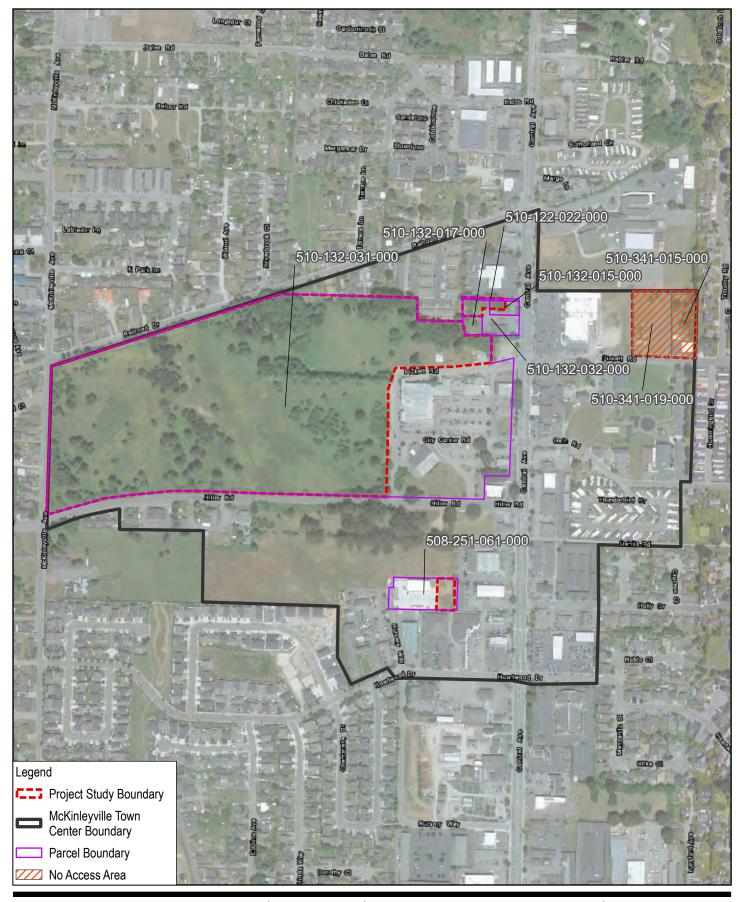


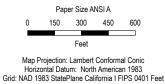
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McKinleyville Town Center Wetlands Mapping Project

Project No. **12607030** Revision No. n No. -Date **Aug 2023**







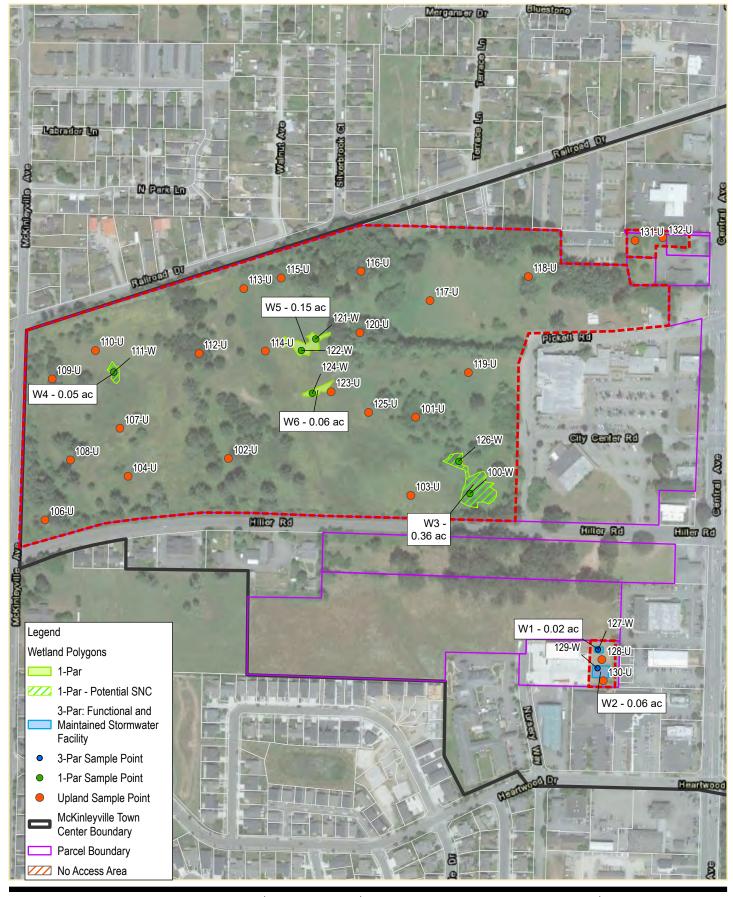


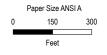
McKinleyville Town Center Wetlands Mapping Project

Project No. 12607030 Revision No. -

Date 8/10/2023

Preliminary Results





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



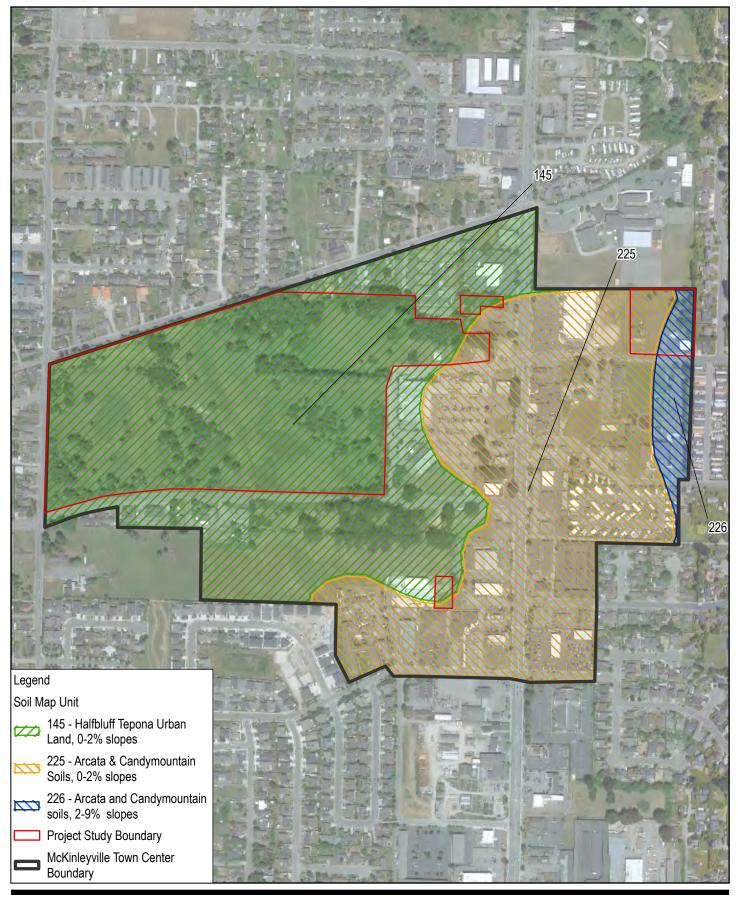


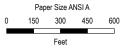
McKinleyville Town Center Wetlands Mapping Project

Project No. 12607030 Revision No. -

Date 8/10/2023

Wetland Delineation Results





Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

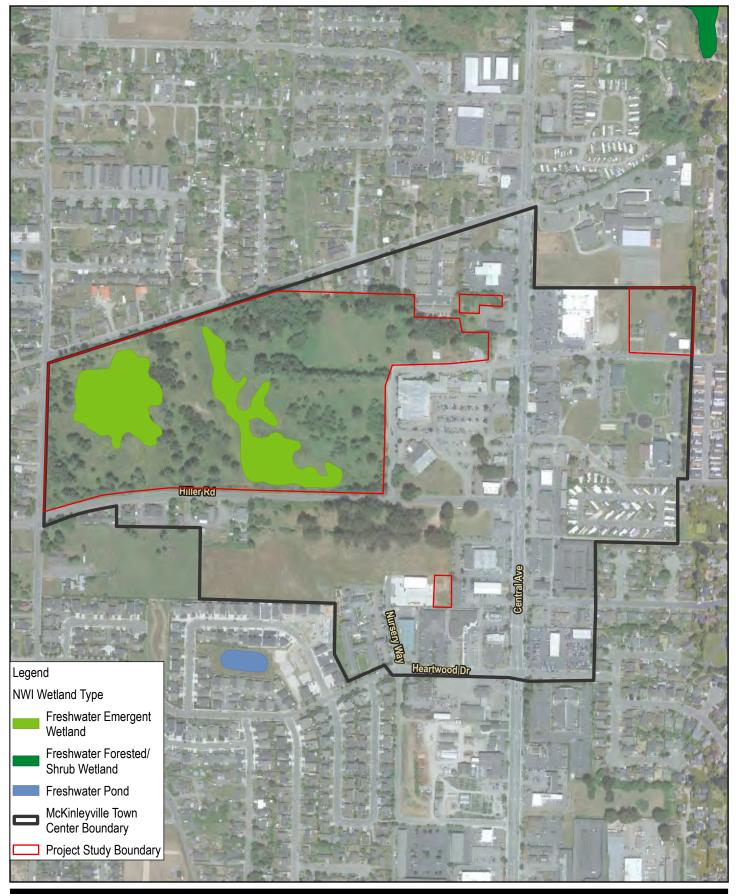


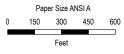
McKinleyville Town Center Wetlands Mapping Project

Project No. 12603187 Revision No. -

on No. -Date **Aug 2023**

NRCS Soil Survey





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

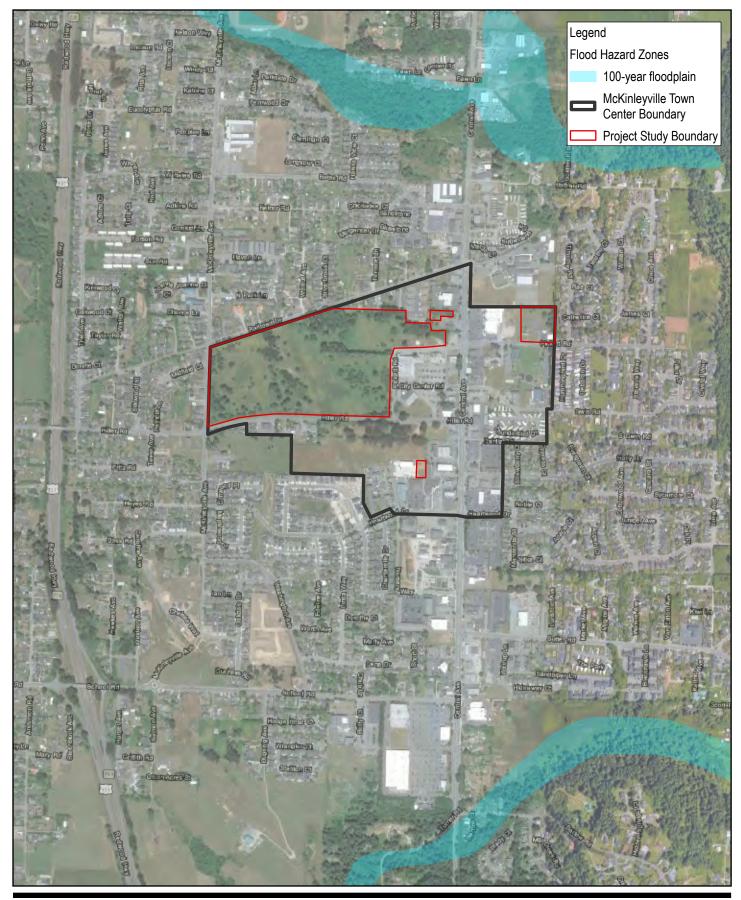


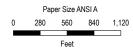


McKinleyville Town Center Wetlands Mapping Project

National Wetland Inventory

Project No. 12603187 Revision No. n No. -Date Aug 2023





Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





McKinleyville Town Center Wetlands Mapping Project

FMΔ 100-year

Project No. 12603187 Revision No. -

Date **Aug 2023**

FEMA 100-year Flood Zone

Appendix B USACE Wetland Determination Data Forms

State: / A Sampling Date: 5 30 (COC) State: / A Sampling Point: 1000 W ection, Township, Range: 531 , TOTAL, ROLE ocal relief (concave, convex, none): 91 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
State: / A Sampling Point: 100-W section, Township, Range: 531 TO7N, ROTE ocal relief (concave, convex, none): 91-10 Slope (%): 5-10 9445
ection, Township, Range: \$31, TO7N, ROTE ocal relief (concave, convex, none): 914 1 10 Slope (%): 5-10 94 15 1 Datum: WASS 10-7.90 9 NWI classification: 9 Yes No (If no, explain in Remarks.) sturbed? Are "Normal Circumstances" present? Yes No ematic? (If needed, explain any answers in Remarks.) sampling point locations, transects, important features, etc. Is the Sampled Area within a Wetland? Yes No
Dominant Indicator Species? Status Dominant Indicator Species? Status Dominant Indicator Species? Status Dominant Indicator Species? Status Dominant Species Across All Strata Total Cover Total Cover Slope (%): 5-10 Slop
Dominant Indicator Dominance Test worksheet: Number of Dominant Species Species Status Species Are OBL, FACW, or FAC: Carbon Carb
NWI classification: Yes No (If no, explain in Remarks.) Sturbed? Are "Normal Circumstances" present? Yes No ematic? (If needed, explain any answers in Remarks.) Stampling point locations, transects, important features, etc. Is the Sampled Area within a Wetland? Yes No Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sturbed? Are "Normal Circumstances" present? Yes No No No No No No No N
sturbed? Are "Normal Circumstances" present? Yes No
sturbed? Are "Normal Circumstances" present? Yes No
Is the Sampled Area within a Wetland? Dominant Indicator Species? Status Total Number of Dominant Species Total Cover Total Cover That Are OBL, FACW, or FAC: Total Cover That Are OBL, FACW, or FAC: That Are OBL, FACW, or FAC: That Are OBL, FACW, or FAC: (A/B)
Is the Sampled Area within a Wetland? Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Is the Sampled Area within a Wetland? Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
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Dominant Indicator Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: (A) Total Cover Total Cover That Are OBL, FACW, or FAC: (A/B)
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Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) (B)
Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) (B)
Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) (B)
Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) (B)
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That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A) (B)
Total Number of Dominant Species Across All Strata (B) Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Species Across All Strata Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Total Cover That Are OBL, FACW, or FAC: (A/B)
That i to obe; i i to i i i i i i i i i i i i i i i i
Prevalence Index worksheet:
Total % Cover of. Multiply by.
FACW species 30 x 2 = 50
FAC species CO x3 = 180
FACU species 28 x 4 = 1/2
UPL species x5 = 5
A FAC Column Totals: 119 (A) 357 (B)
Prevalence Index = B/A = 3.0
FACW Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
FAC Z 2 - Dominance Test is >50%
FACUL S 3 - Prevalence Index is \$3.01
data in Remarks or on a separate sheet)
5 - Wetland Non-Vascular Plants
Problematic Hydrophytic Vegetation ¹ (Explain)
Indicators of hydric soil and wetland hydrology must
Total Cover 177 Total Cover 17
Y/5 FAQLA Hydrophytic
Vegetation Present? Yes No
THE THE THE TANK THE
Total Cover

SOIL

Sampling Point: 100-W

Depth Matrix	Redox F	eatures							
inches) Color (moist) %	Color (moist)		Type'	Loc2	Texture	_		Remarks	
2-8 10 7/2 3/2 100	to a street and the				5-17-1	0,0	Lactic		
1-12 10715/6 93	7 8418 818	7	C	W	SILIR	-	Bury	Hoczins	
9-12 10-11/10					5:11-10				
	~ 			-	110	-			_
		-				_			
	-				-		- 100		
			-		7.			1210 41 11 11	
Type: C=Concentration, D=Depletion, F ydric Soil Indicators: (Applicable to				d Sand Gr				e Lining, M=Matrix natic Hydric Soils	
김 배도에 되는데 얼마나 이렇게 되었다면 하게 되었다.			1.)					iatic Hydric Soils	
_ Histosol (A1)	Sandy Redox (S5)						k (A10)	J/TEN	
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S Loamy Mucky Min		(avcont	MI DA 1			nt Materia	Surface (TF12)	
_ Hydrogen Sulfide (A4)	Loamy Gleyed Ma		lavrahi	MERA I)	100		plain in R	The second secon	
Depleted Below Dark Surface (A11)	Depleted Matrix (F				_ 0	/>	President at a	- constant	
_ Thick Dark Surface (A12)	Redox Dark Surfa	7			³Indica	tors of	hydrophyt	ic vegetation and	
Sandy Mucky Mineral (S1)	Depleted Dark Sur)					ust be present.	
Sandy Gleyed Matrix (S4)	Redox Depression				unle	ess dist	urbed or p	problematic	
estrictive Layer (if present):		,,,,,							
Туре:									1
Depth (inches):					Hydric So	il Pres	ent? Ye	es No_	-
emarks		-			1.00				
8-12	may be buse	d h	07:2	wa/26	isthwol	Kri	e briter	L	
	may be buse	d hi	orti z	un/26	irthworl	Kri	e lacko	Į.	
YDROLOGY Vetland Hydrology Indicators:	may be buse	d h	oti z	vn/26	isthwork	k ri	e bike	<u> </u>	1 200
YDROLOGY Vetland Hydrology Indicators:		d h	o-liz	va /26				6 (2 or more require	ed)
/DROLOGY /etland Hydrology Indicators:					Sec	ondary	Indicators		
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ	ired, check all that apply)	d Leaves	s (B9) (e.		Sec	ondary Water-	Indicators	(2 or more require	
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1)	ired, check all that apply) Water-Staine	d Leaves 2, 4A, an	s (B9) (e.		Sec.	ondary Water- 4A,	Indicators Stained L	6 (2 or more require eaves (B9) (MLRA	
'DROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2)	ired, check all that apply) Water-Staine MLRA 1,	d Leaves 2, 4A, an	s (B9) (e:		Seco	ondary Water- 4A, Draina	Indicators Stained Li and 4B) ge Pattern	6 (2 or more require eaves (B9) (MLRA	
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3)	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B	d Leaves 2, 4A, an 11) tebrates	s (B9) (e: ed 4B)		Seco	ondary Water- 4A, Draina Dry-Se	Indicators Stained Lo and 4B) ge Pattern ason Wat	6 (2 or more require eaves (B9) (MLRA ns (B10)	1, 2
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1)	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver	d Leaves 2, 4A, an 11) tebrates	(B13) (B13) (C1)	xcept	Seco	ondary Water- 4A, Draina Dry-Se Satura	Indicators Stained Li and 4B) ge Patterr ason Wat tion Visible	s (2 or more require eaves (B9) (MLRA ns (B10) er Table (C2)	1, 2
/DROLOGY /etland Hydrology Indicators: /rimary Indicators (minimum of one requirement of the requirement of	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su	d Leaves 2, 4A, an 11) tebrates lifide Odo zosphere	(B13) or (C1) es along	xcept Living Roo	Seco	ondary Water- 4A, Draina Dry-Se Satura Geomo	Indicators Stained Li and 4B) ge Patterr ason Wat tion Visible	s (2 or more require eaves (B9) (MLRA ns (B10) er Table (C2) e on Aerial Imager sition (C2)	1, 2
/DROLOGY /etland Hydrology Indicators: //mary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhi:	d Leaves 2, 4A, an 11) tebrates llfide Odo zosphere Reduced	(B13) or (C1) es along lron (C4	xcept Living Roc	Seco	ondary Water- 4A, Draina Dry-Se Satura Geomo	Indicators Stained Lo and 4B) ge Pattern ason Wat tion Visible orphic Pos	s (2 or more require eaves (B9) (MLRA ns (B10) er Table (C2) e on Aerial Imager iltion (D2) I (D3)	1, 2
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4)	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhic	d Leaves 2, 4A, an 11) tebrates ilfide Odo zosphere Reduced Reductior	(B13) (B13) or (C1) es along lron (C4)	kcept Living Roo) 1 Soils (C6		ondary Water- 4A, Draina Dry-Se Satura Geomo Shallov	Indicators Stained Lo and 4B) ge Patterr ason Wat tion Visible orphic Pos w Aquitaro eutral Tes	s (2 or more require eaves (B9) (MLRA ns (B10) er Table (C2) e on Aerial Imager iltion (D2) I (D3)	1, 2
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Verland Hydrology Indicators: Primary Indicators (minimum of one requications) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface (B4) Field Observations: Surface Water Present? Ves Saturation Present? Yes Includes capillary fringe)	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St (B7) Other (Explaine (B8) No Depth (inche	d Leaves 2, 4A, an 11) tebrates lifide Odo zosphere Reduced Reductior tressed P in in Rem es):	(B13) or (C1) es along lron (C4 n in Tilled lants (D	Living Roo) 1 Soils (C6 1) (LRR A	ots (C3) in	ondary Water- 4A, Draina Dry-Se Satura Geomo Shallov FAC-N Raised Frost-H	Indicators Stained Lo and 4B) ge Patterr ason Wat tion Visible orphic Pos w Aquitard eutral Tes Ant Mour leave Hur	eaves (B9) (MLRA) as (B10) er Table (C2) e on Aerial Imager iition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)	1, 2
/DROLOGY /etland Hydrology Indicators: //mary Indicators (minimum of one requestrated Marker (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfaction of the	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St (B7) Other (Explaine (B8) No Depth (inche	d Leaves 2, 4A, an 11) tebrates lifide Odo zosphere Reduced Reductior tressed P in in Rem es):	(B13) or (C1) es along lron (C4 n in Tilled lants (D	Living Roo) 1 Soils (C6 1) (LRR A	ots (C3) in	ondary Water- 4A, Draina Dry-Se Satura Geomo Shallov FAC-N Raised Frost-H	Indicators Stained Lo and 4B) ge Patterr ason Wat tion Visible orphic Pos w Aquitard eutral Tes Ant Mour leave Hur	eaves (B9) (MLRA) as (B10) er Table (C2) e on Aerial Imager iition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)	1, 2
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requirement of some requirement o	ired, check all that apply) Water-Staine MLRA 1, Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St (B7) Other (Explaine (B8) No Depth (inche	d Leaves 2, 4A, an 11) tebrates lifide Odo zosphere Reduced Reductior tressed P in in Rem es):	(B13) or (C1) es along lron (C4 n in Tilled lants (D	Living Roo) 1 Soils (C6 1) (LRR A	ots (C3) in	ondary Water- 4A, Draina Dry-Se Satura Geomo Shallov FAC-N Raised Frost-H	Indicators Stained Lo and 4B) ge Patterr ason Wat tion Visible orphic Pos w Aquitard eutral Tes Ant Mour leave Hur	eaves (B9) (MLRA) as (B10) er Table (C2) e on Aerial Imager iition (D2) d (D3) st (D5) nds (D6) (LRR A) mmocks (D7)	1, 2

andform (hillslope, terrace, etc.):	1 + /y / 4 (/ Lat: 40	Local relief (concave,	State: CA Sampling Point: 101-41 Inge: 531 TO7 N ROLE convex, none): F.E. Stope (%): C- Long: -124.165157 Datum: MASS. SABS NWI classification:
re climatic / hydrologic conditions on the site to			P
			"Normal Circumstances" present? Yes X No
re Vegetation, Soil, or Hydrolo			eeded, explain any answers in Remarks.)
			ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No X	Is the Sampled	i Area
Remarks:	NOK		
EGETATION – Use scientific name	es of plants.		P
Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Indicator Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
4Sanling/Shruh Stratum (Plot size:		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet: Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
5.			FAC species 166 x3 = 498
1		= Total Cover	FACU species
Herb Stratum (Plot size:)	29	Y The	UPL species
HOLLOW Linder	- 10	N F-AI	
Kaningles (DD)	76	Y FAT	Prevalence Index = B/A =3.34
. Vicia Setive	17	N 1/21	Hydrophytic Vegetation Indicators:
5. 10+45 proprietas	115	. N FAC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
110- 01-4-111	21	Y FAL	_ 3 - Prevalence Index is \$3.01 Fa1:3.34
1. ALtoxutum neles	Luc 15	Y #ACL	4 - Morphological Adaptations (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation ¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
50	110	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	30	Y FACU	Hydrophytic Vegetation
2			I T WHY SHIP SHIP I
2		= Total Cover	Present? Yes NoX

Sampling Point:

Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type¹ Loc²	Texture Remarks
-12 7/5/1 3/3 100		5-17-an
		-
Total Control Control Control Control	A-E-durat Matrix CC-Coursed as Courted Course	Contra 2 contra Bl-Don Histor Manager
Type: .C=Concentration, D=Depletion, Rr Tydric Soil Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Coated Sand	d Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Solis ³ :
		- Barrier -
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F8) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Thick Dank Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	reduce pepressions to of	amoss distuibed of problematic.
Type:		L. V.
Depth (inches):		Hydric Soil Present? Yes No
Remarks		
YDROLOGY		
YDROLOGY Wetland Hydrology Indicators:	ed: check all that apply)	Secondary Indicators (2 or more required)
Primary Indicators: Primary Indicators (minimum of one requires)		Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI D1) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Por Process YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second in	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI B7) Other (Explain in Remarks) (B8)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Process Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No
Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Site of Concave Surface Surface Water Present? Water Table Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes capillary fringe) Describe Recorded Data (stream gauge, researched)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No
Process Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Saturation Present? Yes Saturation Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No
Primary Indicators (minimum of one requires Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Company of the Company of the	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Vetland Hydrology Present? Yes No

WETLAND DETERMINATION I	DATA FORM -	Western Mou	ntains, Valleys, and Coast Region
rojecusite: Mckinle, wille Tom Cox	fer city	County Mc K	Sampling Date: 5/30
pplicant/Owner: (QINT) of Hungold+		Journy.	State CA Sampling Point: 102-L
vestigator(s): MII/CH		tion Township Do	nge: S31 HO7N/ ROIE
vestigator(s): VOI II / CI			
Indform (hillslope, terrace, etc.): Marel 4172	Loc Loc	al relief (concave, a	convex, none): + 124.107725 Datum: FAFE
	Lat:	942820	Long: - 124.107725 Datum: KARE
oil Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site typical for	this time of year?		
e Vegetation, Soil, or Hydrology	_ significantly dist	urbed? Are	'Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology	_ naturally probler	matic? (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	p showing sa	mpling point le	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No_X		
Hydric Soil Present? Yes		Is the Sampled	
Wetland Hydrology Present? Yes	No	within a Wetlar	nd? Yes No
Remarks:		. (
yea plot only -	No surdan	level oper	when of hydrology.
EGETATION – Use scientific names of pl			
10		ominant Indicator	Dominance Test worksheet:
Free Stratum (Plot size: 1) M		pecies? Status_	Number of Dominant Species
. Sitks spicer		Y CAC	That Are OBL, FACW, or FAC: (A)
e Alnes libra		N FAI	Total Number of Dominant
3			Species Across All Strata: (B)
	- 50		Percent of Dominant Species 7 7
Sapling/Shrub Stratum (Plot size:	<u></u> =	Total Cover	That Are OBL, FACW, or FAC: (A/B)
R459457615171			Prevalence Index worksheet:
HOTE FOR CYTISTS	5 COPKI19233	K NIT	Total % Cover of: Multiply by:
3			OBL species
I			FACW species $Q \times 2 = 0$ FAC species $Q \times 3 = 246$
5.			FACU species 67 x4= 248
the motor makes I have	14 =	Total Cover	UPL species 43 x5 = 2(5
lerb Stratum (Plot size:)	17	Y FAC	Column Totals: 197 (A) 779 (B)
Introvers odartin	16	Y FACU	
Platico lanceolità	12	V PACU	Prevalence Index = B/A = 3.80 Hydrophytic Vegetation Indicators:
torotern officials	100	Y PACU	1 - Rapid Test for Hydrophytic Vegetation
PLENETECH TIDES	7	N PAC	2 - Dominance Test is >50% [
CACTER SLABFICE	712	1 IAL	3 - Prevalence Index is ≤3.0' Fa
			4 - Morphological Adaptations (Provide supporting
3.			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11,			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5~	<u> </u>	otal Cover	be present, unless disturbed of problematic.
Woody Vine Stratum (Plot size:)	20	Y DAIL	
		1 -1100	Hydrophytic Vegetation
2	20 -1	otal Cover	Present? Yes No
N B 0	-71	ordi COVEI	
% Bare Ground in Herb Stratum			

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region Project/Site: Mr Krola, ulle Tour Peter HUM Sampling Date: 5/30/2075 City/County: Mekmlery 1h Court of Healile State: 1 Sampling Point: 103-U Applicant/Owner: MYICH Investigator(s): Section, Township, Range: Local relief (concave, convex, none) CANHA Datum: Un 8 Lat: 40,94748 Long: -174, 111<19 Subregion (LRR); _____ NWI classification: Soil Map Unit Name: ___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes _____ No Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes Is the Sampled Area Hydric Soil Present? -Yes No within a Wetland? Wetland Hydrology Present? Yes No Remarks: only - Do grater level dogunters at hydrology, VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: ___ % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species = Total Cover Sapling/Shrub Stratum (Plot size: 1515 That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: Total % Cover of: OBL species **FACW** species FAC species **FACU** species = Total Cover **UPL** species Herb Stratum (Plot size: Column Totals: Prevalence Index = B/A = 3,54 3 Hydrophytic Vegetation Indicators: FACIL __ 1 - Rapid Test for Hydrophytic Vegetation FACE 5. __ 2 - Dominance Test is >50% FAL __ 3 - Prevalence Index is ≤3.01 Fa/ 6. FACU 7. ___ 4 - Morphological Adaptations (Provide supporting FAC data in Remarks or on a separate sheet) FACU 5 - Wetland Non-Vascular Plants1 9. 15644) Problematic Hydrophytic Vegetation¹ (Explain) The with Childensis FALL 10 FACU ¹Indicators of hydric soil and wetland hydrology must ("I is other to nother = Total Cover79%, 23,8 be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: Hubus within Hydrophytic Rubar armitan Vegetation Present? = Total Cover % Bare Ground in Herb Stratum Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region City/County Mc & Trule / HULA Sampling Date: 5/30/2007 Project/Site: Mc Enlo, w/l, tou Ced Cants of Hendeldt State: CA _ Sampling Point: 10014 Applicant/Owner: _____ Investigator(s): _ Section, Township, Range: ___ Flort Landform (hillslope, terrace, etc.): White Local relief (concave, convex, none): _____ Subregion (LRR): Lat: 10 AUZGO 6 Long: 5/24, 109 114 Soil Map Unit Name: ____ NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ___ Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: plot only, No surface level rulizators of hydre VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: _____) % Cover Species? Status Number of Dominant Species 1. 59 hy 31 Jehn 19 INW That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species = Total Cover (A/B) That Are OBL. FACW, or FAC: Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Saler headstann Total % Cover of: Multiply by: OBL species FACW species 84 FAC species FACU species 31 = Total Cover UPL species Herb Stratum (Plot size: Column Totals: 440 1. Anthought ofodalles 2. Walter / Enales Prevalence Index = B/A = Letus Mianosus Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% __ 3 - Prevalence Index is ≤3.0° Fa / ___ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 45 = Total Cover (0) Woody Vine Stratum (Plot size: Hydrophytic Vegetation Yes No X Present? = Total Cover % Bare Ground in Herb Stratum Remarks: GBore grand cake includes Roursmus

			Sampling Date:	1/10
Applicant/Owner: Carry & Huwbell	NH		State: CA Sampling Point:	00
	Sect	The state of the s	The second secon	0.1
andform (hillslope, terrace, etc.);				
Subregion (LRR):	Lat: <u>40.94</u>	713205	Long: =179.1162+024 Datum:	NASS
Soil Map Unit Name:			NWI classification:	
are climatic / hydrologic conditions on the site typical for	this time of year?	Yes No _	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology	_ significantly distu	rbed? Are	Normal Circumstances" present? Yes &	No
re Vegetation, Soil, or Hydrology	_ naturally problem	natic? (If ne	eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site ma	p showing sa	mpling point l	ocations, transects, important feat	ures. etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes Yes	No X	Is the Sampled within a Wetlan	Area	
Remarks:	1- No sur	he led Hunlys of V	Malon	
/EGETATION - Use scientific names of pla		IC-MO-07 0 1 0	The of	
Tree Stratum (Plot size:		minant Indicator ecies? Status	Dominance Test worksheet:	
1. A In CS LONG	Ja Cover Sp	Y DAC	Number of Dominant Species That Are OBL, FACW, or FAC	(A)
2. 17/15 61+ 1-4-1	25	7 EAC	2	
3.			Total Number of Dominant Species Across All Strata:	(B)
4			Percent of Dominant Species 7 C	-1-
52	-9() =T	otal Cover	That Are OBL, FACW, or FAC	/- (A/B)
Sapling/Shrub Stratum (Plot size:	18	Y LIPL	Prevalence Index worksheet:	
2. MAY OLANGTONIA	1.1	Y FALU	Total % Cover of: Multiply b	
3. ILOLE BYMMOLICAL		N FACU	OBL species	_
4			FACW species	7
5			FAC species 123 x4 = 447	7
I h	<u> 19</u> = T	otal Cover	UPL species 18 x5= 90	
Herb Stratum (Plot size:			Column Totals: 210 (A) 78	9 (B)
2 ALTHORASTECK OMProdu	27	Y FACU	- 7	
3 Hymrile Cadida	7	N FACO	Prevalence Index = B/A = 9.76 Hydrophytic Vegetation Indicators:	
4. The best of the			1 - Rapid Test for Hydrophytic Vegetation	on
5. Mr. show the diletoth	2	N FACU	2 - Dominance Test is >50% Fa	
6. 10 Est 12-7-5	19	Y FAL	_ 3 - Prevalence Index is ≤3.0 Fz.	
7,			4 - Morphological Adaptations¹ (Provide	supporting
8			data in Remarks or on a separate sh 5 - Wetland Non-Vascular Plants ¹	eetj
9			Problematic Hydrophytic Vegetation ¹ (E	vnlain)
10			Indicators of hydric soil and wetland hydroic	
11	-7	otal Cover	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:	02	/ EN	/	/
1. Kunus urling	(A-)	7 FALC	Hydrophytic	/
2. 1/1/4 2011	17	/ FACU	Vegetation Present? Yes No	7
	LS =T	otal Cover		-
% Bare Ground in Herb Stratum	7			

pplicant/Owner: Courty of Humbill		County: Mak	State: Sampling Point: 7
vestigator(s): MH, CH		tion, Township, Ra	inge:
andform (hillstope, terrace, etc.): Man Herra	Loc	al relief (concave,	convex, none); 105/64 Stope (%): 3-8
	Lat: 40.94	310713	Long: 124,16923597 Datum: NA-88
nil Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site typical for th	is time of year?	Yes X No_	(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology	significantly dist	urbed? Are	"Normal Circumstances" present? Yes No
e Vegetation, Soit, or Hydrology	naturally problem	natic? (If ne	eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site map	showing sa	mpling point l	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes 1 Hydric Soil Present? Yes 1 Wetland Hydrology Present? Yes 1	No X	Is the Sampled	I Area
Remarks:	10 —	1	
EGETATION – Use scientific names of plan	nts.		
Tree Stratum (Plot size:		ominant Indicator pecies? Status	Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
			Species Across All Strata:(B)
			Percent of Dominant Species
5-	= 1	Total Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:	27	-/ FACL	Prevalence Index worksheet:
Alnes 1-6/4	- 0	V EA	Total % Cover of: Multiply by:
Spirin doublesii	70	7 = 1/1	OBL species x1 =
700778 3032-373-37			FACW species x2 = 108
			FAC species / x3 = 5
	49 -	Total Cover	FACU species x 4 = Z 6 8
lerb Stratum (Plot size:)	2-7	V EN 40	UPL species x5=
ASTLOXETUN ORUGE	- 1/	/ MCO	Column Totals: 139 (A) 477 (B)
, Holan Later	15	Y FAC	Prevalence Index = B/A = 3:09
HTDITICE FEMILITY	_ (1	Y PALU	Hydrophytic Vegetation Indicators:
Planting (Garrolds		iv FALM	1 - Rapid Test for Hydrophytic Vegetation
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		V FAC	2 - Dominance Test is >50% Fa
		VIAC	3 - Prevalence Index is ≤3.01 Fa,
			4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
·			5 - Wetland Non-Vascular Plants ¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
0 1.			*Indicators of hydric soil and wetland hydrology must
	77-	otal Cover	be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)	10	-/ Taller	
Itubis ursicir	17	1 PACO	Hydrophytic
			Vegetation
A HOLD TON THE BOSTO	11/2 = 1	otal Cover	Present? Yes No
6 Bare Ground in Herb Stratum			· ·

Depth	Matrix		Redox Feat	ures				
(inches) Color (Color (mo			Loc2	Texture	Ren	narks
U-14 10-1	211 100	<i>y</i> —				loans		
14-17 10-1	3/3 95	5215	19 5	5 0	LA	siltlan		
Cup -	1		1/10				_	
END			- 0				-	
				_		-		
		7.7						
							-	
								-0<
¹ Type: C=Concentratio					ed Sand G		cation: PL=Pore Li	
Hydric Soil Indicators:	: (Applicable to			noted.)			ors for Problematic	: Hydric Soils':
Histosol (A1)	0.		Redox (S5)				n Muck (A10)	50
Histic Epipedon (A2	2)		Matrix (S6)			The second secon	Parent Material (T	
Black Histic (A3)			Mucky Mineral		t MLRA 1)		y Shallow Dark Sur	
Hydrogen Sulfide (/			Gleyed Matrix	(+2)		Om	er (Explain in Rema	irks)
Depleted Below Da Thick Dark Surface	the state of the s		d Matrix (F3) Dark Surface (E6)	A	3 _{Indicate}	ors of hydrophytic v	anatation and
Sandy Mucky Mine		The second secon	d Dark Surface				nd hydrology must	
Sandy Gleyed Matr			Depressions (F				s disturbed or prob	The state of the s
Restrictive Layer (if pr	Market Committee		- opisoonique (i	0/		1	o diotarada en prod	TOTAL OF
Туре:								
Depth (inches):						Mudeic Soil	Present? Yes_	No
HAZZER A BOATTE						THE TAX AND A		
Remarks:			0					
Remarks:								
Remarks: IYDROLOGY Wetland Hydrology Inc	dicators:							
HYDROLOGY Wetland Hydrology Inc. Primary Indicators (mini	dicators: imum of one requ		the other parts of all				ndary Indicators (2	
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1)	dicators; imum of one requ	Wa	ater-Stained Le		except		Vater-Stained Leave	
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (dicators; imum of one requ	Wa	ater-Stained Le		except	_ v	Vater-Stained Leave	es (B9) (MLRA 1, 2
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (Saturation (A3)	dicators; imum of one requ	Wa	ater-Stained Lo MLRA 1, 2, 4 It Crust (B11)	A, and 4B)	except	_ v	Vater-Stained Leave 4A, and 4B) Frainage Patterns (E	es (B9) (MLRA 1, 2 310)
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A3) Water Marks (B1)	dicators: imum of one requ A2)	Wa Sal Aqı	ater-Stained Lo MLRA 1, 2, 4 It Crust (B11) uatic Invertebr	A, and 4B) rates (B13)	except	_ v	Vater-Stained Leave 4A, and 4B) Frainage Patterns (E Fry-Season Water T	es (B9) (MLRA 1, 2 310) 'able (C2)
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits	dicators: imum of one requ A2)	Wa Sal Aqı Hyo	ater-Stained Lo MLRA 1, 2, 4 It Crust (B11) uatic Invertebr drogen Sulfide	A, and 48) rates (B13) e Odor (C1)		v c s	Vater-Stained Leave 4A, and 4B) Prainage Patterns (E Pry-Season Water T Paturation Visible on	es (B9) (MLRA 1, 2 310) able (C2) Aerial Imagery (C
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3)	dicators: imum of one requ A2)	Wa Sal Aqı Hyı Ox	ater-Stained Lo MLRA 1, 2, 4 It Crust (B11) uatic Invertebr drogen Sulfide idized Rhizos	A, and 4B) rates (B13) e Odor (C1) pheres along	Living Ro	V C S ots (C3) G	Vater-Stained Leave 4A, and 4B) Irainage Patterns (B Iry-Season Water T iaturation Visible on Geomorphic Position	es (B9) (MLRA 1, 2 310) fable (C2) Aerial Imagery (C 1 (D2)
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (dicators: imum of one requ A2)	Wa Sal Aqı Hyı Ox Pre	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebr drogen Sulfide idized Rhizos esence of Red	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C	Living Roo	V C s ots (C3) S	Vater-Stained Leave 4A, and 4B) Irainage Patterns (B Iry-Season Water T Isaturation Visible on Seomorphic Position Irallow Aquitard (D:	es (B9) (MLRA 1, 2 310) fable (C2) Aerial Imagery (Ct 1 (D2)
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (B5)	dicators: imum of one requ A2) (B2)	Wall Sall Aqu Ox Pre Re	ater-Stained Lo MLRA 1, 2, 4. It Crust (B11) uatic Invertebr drogen Sulfide didized Rhizosp esence of Red cent Iron Red	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille	Living Roo (4) ed Soils (CC	V C C S ots (C3) S S	Vater-Stained Leave 4A, and 4B) Irainage Patterns (E Iry-Season Water T Laturation Visible on Geomorphic Position Challow Aquitard (D: AC-Neutral Test (D	es (B9) (MLRA 1, 2 310) Table (C2) A Aerial Imagery (C1 1 (D2) 3) 5)
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A1) Saturation (A3) Water Marks, (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks	dicators: imum of one requ (A2) (B2) (B4) s (B6)	Wa Sal Aqı Hyı Ox Pre Re Stu	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide didized Rhizosp esence of Red cent Iron Red unted or Stress	A, and 4B) rates (B13) c Odor (C1) pheres along luced fron (C uction in Tille sed Plants (E	Living Roo (4) ed Soils (CC	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leave 4A, and 4B) Prainage Patterns (B Pry-Season Water T Paturation Visible on Beomorphic Position Phallow Aquitard (D: AC-Neutral Test (D Paised Ant Mounds	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (C3 (D2) (3) (5)
HYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (and Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (and Iron Deposits (B5) Surface Soil Cracks Inundation Visible (B5)	dicators: imum of one requi (A2) (B2) (B4) s (B6) on Aerial Imagery	Wa Sal Aqr Hyr Ox Pre Re Stu (B7) Oth	ater-Stained Lo MLRA 1, 2, 4. It Crust (B11) uatic Invertebr drogen Sulfide didized Rhizosp esence of Red cent Iron Red	A, and 4B) rates (B13) c Odor (C1) pheres along luced fron (C uction in Tille sed Plants (E	Living Roo (4) ed Soils (CC	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leave 4A, and 4B) Irainage Patterns (E Iry-Season Water T Laturation Visible on Geomorphic Position Challow Aquitard (D: AC-Neutral Test (D	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (C3 (D2) (3) (5)
HYDROLOGY Wetland Hydrology Inc. Primary Indicators (mini Surface Water (A1) High Water Table (Saturation (A3) Water Markis (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (Iron Deposits (B5) Surface Soil Cracks Inundation Visible (Sparsely Vegetated	dicators: imum of one requi (A2) (B2) (B4) s (B6) on Aerial Imagery	Wa Sal Aqr Hyr Ox Pre Re Stu (B7) Oth	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide didized Rhizosp esence of Red cent Iron Red unted or Stress	A, and 4B) rates (B13) c Odor (C1) pheres along luced fron (C uction in Tille sed Plants (E	Living Roo (4) ed Soils (CC	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leave 4A, and 4B) Prainage Patterns (B Pry-Season Water T Paturation Visible on Beomorphic Position Phallow Aquitard (D: AC-Neutral Test (D Paised Ant Mounds	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (C3 (D2) (3) (5)
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A3) Water Marks, (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated	dicators: imum of one requi A2) (B2) (B4) s (B6) on Aerial Imagery	Wa Sal Aqu Ox Pre Re Stu (B7) Oth	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebr drogen Sulfide idized Rhizos; esence of Red cent Iron Red unted or Stress her (Explain in	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (E Remarks)	Living Roo (4) ed Soils (CO (1) (LRR A	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leave 4A, and 4B) Prainage Patterns (B Pry-Season Water T Paturation Visible on Beomorphic Position Phallow Aquitard (D: AC-Neutral Test (D Paised Ant Mounds	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (C3 (D2) (3) (5)
IYDROLOGY Wetland Hydrology Inc. Primary Indicators (mini	dicators: imum of one requ A2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surface	Wall Sal Aqu Ox Pre Stu Ottook (B8)	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide idized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in	A, and 4B) rates (B13) e Odor (C1) pheres along luced fron (C uction in Tille sed Plants (D Remarks)	J Living Roo (4) ed Soils (Co (1) (LRR A	- V - C - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leave 4A, and 4B) Prainage Patterns (B Pry-Season Water T Paturation Visible on Beomorphic Position Phallow Aquitard (D: AC-Neutral Test (D Paised Ant Mounds	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (C3 (D2) (3) (5)
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A3) Water Marks, (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (B1) Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes	— Wa — Sal — Aqı — Hyı — Ox — Pre — Re — Stu (B7) — Oth De (B8)	MLRA 1, 2, 4. It Crust (B11) uatic Invertebr drogen Sulfide cidized Rhizos; esence of Red ecent Iron Red unted or Stress her (Explain in	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci (1) (LRR A	V C S ots (C3) G S 5) F	Vater-Stained Leave 4A, and 4B) Irainage Patterns (Boy-Season Water Total Iraination Visible on the State of Season Water Total Iraination Visible on the Season Water Total Iraination Aquitard (Display AC-Neutral Test (Display Ant Mounds Irost-Heave Hummon)	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)
Algal Mat or Crust (Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present? Surface Water Table (B1) Sediment Deposits (B3) Algal Mat or Crust (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present?	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes Yes	— Wa — Sal — Aqı — Hyı — Ox — Pre — Re — Stu (B7) — Oth De (B8)	ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide idized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci (1) (LRR A	V C S ots (C3) G S 5) F	Vater-Stained Leave 4A, and 4B) Prainage Patterns (B Pry-Season Water T Paturation Visible on Beomorphic Position Phallow Aquitard (D: AC-Neutral Test (D Paised Ant Mounds	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)
Primary Indicators (minimary I	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes e)		ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide cidized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in epth (inches): epth (inches):	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci O1) (LRR A	V C S ots (C3) G S s) F F	Vater-Stained Leave 4A, and 4B) Irainage Patterns (Boy-Season Water Total Iraination Visible on the State of Season Water Total Iraination Visible on the Season Water Total Iraination Aquitard (Display AC-Neutral Test (Display Ant Mounds Irost-Heave Hummon)	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)
Algal Mat or Crust (Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present? Surface Water Table (B1) Sediment Deposits (B3) Algal Mat or Crust (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present?	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes e)		ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide cidized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in epth (inches): epth (inches):	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci O1) (LRR A	V C S ots (C3) G S s) F F	Vater-Stained Leave 4A, and 4B) Irainage Patterns (Boy-Season Water Total Iraination Visible on the State of Season Water Total Iraination Visible on the Season Water Total Iraination Aquitard (Display AC-Neutral Test (Display Ant Mounds Irost-Heave Hummon)	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)
Primary Indicators (minimary I	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes e)		ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide cidized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in epth (inches): epth (inches):	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci O1) (LRR A	V C S ots (C3) G S s) F F	Vater-Stained Leave 4A, and 4B) Irainage Patterns (Boy-Season Water Total Iraination Visible on the State of Season Water Total Iraination Visible on the Season Water Total Iraination Aquitard (Display AC-Neutral Test (Display Ant Mounds Irost-Heave Hummon)	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)
IYDROLOGY Wetland Hydrology Inc Primary Indicators (mini Surface Water (A1) High Water Table (A1) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B5) Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringed Describe Recorded Date	dicators: imum of one required (B2) (B2) (B4) s (B6) on Aerial Imagery d Concave Surfact Yes Yes e)		ater-Stained Le MLRA 1, 2, 4. It Crust (B11) uatic Invertebre drogen Sulfide cidized Rhizosp esence of Red cent Iron Red unted or Stress her (Explain in epth (inches): epth (inches):	A, and 4B) rates (B13) e Odor (C1) pheres along luced Iron (C uction in Tille sed Plants (D Remarks)	Living Roo (4) ed Soils (Ci O1) (LRR A	V C S ots (C3) G S s) F F	Vater-Stained Leave 4A, and 4B) Irainage Patterns (Boy-Season Water Total Iraination Visible on the State of Season Water Total Iraination Visible on the Season Water Total Iraination Aquitard (Display AC-Neutral Test (Display Ant Mounds Irost-Heave Hummon)	es (B9) (MLRA 1, 2 310) (able (C2) (Aerial Imagery (Ci (D2) (B) (D5) (LRR A) (D6) (LRR A)

Project/Site: Mckm/yulle Tour Cal			1. 1	Sampling Date: 5/30/
Applicant/Owner: Cont. of Honby/	1 -7	,		State: _CO Sampling Point: _IOX -
nvestigator(s): CH	•	Section, To	ownship, Ra	
andform (hillstope, terrace, etc.): MATM LCTA	1	Local relie	f (concave.	convex, none): Moh(Slope (%): O-
Subregion (LRR):	Lat: 4	0.94	2765	Long: -124.109910 Datum: NA 88
oil Map Unit Name:				NWI classification:
re climatic / hydrologic conditions on the site typical for	or this time of vea	ar? Yes /	× No	
re Vegetation, Soil, or Hydrology				'Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology				eeded, explain any answers in Remarks.)
				ocations, transects, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes		ls ti	ne Sampled nin a Wetlar	Area
Remarks: Vog plot ruly	- No 9617	ichor Who	ly of	h potrology
/EGETATION – Use scientific names of	plants.			' 0/
Tree Stratum (Plot size:	Absolute % Cover		t Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3.				Species Across All Strata: (B)
4		-		Percent of Dominant Species 207
Sapling/Shrub Stratum (Plot size:	F 1	= Total Co	over	That Are OBL, FACW, or FAC: (A/B)
1. LY FISUS STOPETES	68	7	NA	Prevalence Index worksheet:
2. Southis douglesii	12	N	FACL	Total % Cover of: Multiply by:
3				OBL species
4				FAC species 11 x3 = 33
5	0 1		- 5.5	FACU species 133 x4= 537
Herb Stratum (Plot size:	10	= Total Co	over 30	UPL species(8 x5= 340
1. Anthoxenthan odylet	L 37	7	FACU	Column Totals: 224 (A) 979 (B)
2. HYAITIELL I-diede	9	N	FACU	Prevalence Index = B/A =
3 Iris doLalasiana	5	N	WIL	Hydrophytic Vegetation Indicators:
4. # piers lonatos		1	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Humby Grotospilla	= f 0 =	_7_	FACU	2 - Dominance Test is >50% Fc-1
6				3 - Prevalence Index is <3.0' Fq.(
7		, det		4 - Morphological Adaptations¹ (Provide supporting
8			-	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9			-	Problematic Hydrophytic Vegetation¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must
11	79	= Total Co		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	- Sea	- Total Co	-	
	77	7	FACU	Hydrophytic
1. Tubis (15,765				Vegetation
1. Nois (15,76)				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	77	= Total Co	over	Present? Yes No

WETLAND DETERMINATION DA	ATA FORI	VI – Wes	tern Mou	ntains, Valleys, and Coast Region
Project/Site: Mclandy will Tour Cost	1	City/Count	v. M/K/	by Ulu / Hun Sampling Date: 5/30/20
Applicant/Owner: Colory of Hungaly	-		,	State: CA Sampling Point: 109 -U
Mall /		Section T	ownship, Rar	
Landform (hillslope, terrace, etc.): Www.xx &com				
Subregion (LRR):				
Soil Map Unit Name:	Lat10.	74340		NWI classification:
Are climatic / hydrologic conditions on the site typical for thi	is time of us	ne? Van	€ No	
Are Vegetation, Soil, or Hydrology:				Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology				eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplii	ng point lo	ocations, transects, important features, etc
	10_×	le t	he Sampled	Area
	10===		he Sampled hin a Wetlan	
Wetland Hydrology Present? Yes Nemarks:	10			
remarks.	12 64	1.20	pul	
Remarks: Veg Plot only -	00 90	in	drung 6	of hydroff.
VEGETATION – Use scientific names of plan				
12 12 1	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: (-3))	\$	Species'	Status	Number of Dominant Species
1. Prus radiata	- 0	->-	TOG.	That Are OBL, FACW, or FAC:(A)
2. Pres Sitch 44		-7	THUE	Total Number of Dominant
3				Species Across All Strata: (B)
4	160	= Total C	over	Percent of Dominant Species That Are OBL, FACW, or FAC: 12.5 (A/B)
Sapling/Shrub Stratum (Plot size: (=15)	-			That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1. Spinh down 135. They	>	-	FACW	Total % Cover of: Multiply by:
2. Cydigus Scapains.	3	7	UPC	OBL species x 1 =
3. Calyapashe Franchetii	- 5	-7	400	FACW species 5 x2= 10
4. //x agailtha		-	- Minay	FAC species <u>76</u> x3 = <u>78</u>
5	17	- Tetal C	over 70 = 24	FACU species 75 x 4 = 3/0
Herb Stratum (Plot size: [-5])	_ , _		To = 24	
1. Pforialing agree mun	35	Y.05	FAU.	Column Totals: 124 (A) 478 (B)
2. Arribaratus moderatus m	78	MI	FACY	Prevalence Index = B/A = 3.85
3. Holyus (mati)	- 13		FAC	Hydrophytic Vegetation Indicators:
4. Jurula corosa	$-\frac{7}{3}$		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Eiza lacitara	$-\frac{3}{3}$	-	FACU	2 - Dominance Test is >50% 3
		-	TACH	3 - Prevalence Index is ≤3.0¹ ₹5./
7 8		-		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9	-			5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: (115")	Su	= Total Co	over 200 = 47	be present, unless disturbed or problematic.
Treating Officially (1 for Size.	5		ENCL.	Description of the second of t
1. Ruba 2 40204,5		7	THUU	Hydrophytic Vegetation
2		= Total Co		Present? Yes No
% Bare Ground in Herb Stratum	-	_~ 10tai Ct	JVCI	
Remarks:				4. 101

			ntains, Valleys, and Coast Region
roject/Site: Malahyll Toma Cond	City/0	County: Mc/	Sampling Date: 5/30
pplicant/Owner: Tewty 17 Hubd	AL L		State: A Sampling Point: 1/0-1
vestigator(s): MH/CI+	Sarti	on, Township, Rai	
andform (hillslope, terrace, etc.): Man 46	of I lead	d relief (seeses)	1/074
ubregion (LRR): A	1 40 80	129165	Convex, none):
	Lat: (U.Cr-	121110	
il Map Unit Name:	No. a a	. X	NWI classification:
e climatic / hydrologic conditions on the site typical for			(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology	_ naturally problem	atic? (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site ma	ap showing san	npling point le	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No V		
Hydric Soil Present? Yes		is the Sampled	X
	No	within a Wetlar	nar resNo:
Remarks:			
	3000		
EGETATION – Use scientific names of p			
Tree Stratum (Plot size: 10%)		minant Indicator	Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant Species Across All Strata: (B)
			Percent of Dominant Species
Seeling (Charle Charles (Diet size)	= To	otal Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)	47	7 UPL	Prevalence Index worksheet:
Vaccinion Over	- 4	Y FACU	Total % Cover of: Multiply by:
COLOMORSTAN CARISCEO	(2	NIDA	OBL species x1 =
			FACW species x2=
,			FAC species $\frac{7}{68}$ $\times 3 = \frac{21}{272}$
120	5 5 = To	otal Cover	110
Herb Stratum (Plot size:)	27	1 FACL	UPL species 44 x5 = 295 Column Totals: 124 (A) 560 (B)
45140Xcnth 0/10/4.	5 15	FACU	11-11
Happiles reliede	13	Y FALL	Prevalence Index = B/A = 4.79
HOLLE LEND	7 1	Y FAL	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
			3 - Prevalence Index is \$3.0 Fg
			4 - Morphological Adaptations (Provide supporting
			data in Remarks or on a separate sheet)
),			5 - Wetland Non-Vascular Plants ¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
1	- I - C		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	(2 \J = To	tal Cover	The state of the s
1. Itubus ursites	11	1 1-40	Hudrophylic
2			HydrophyticVegetation
	= To	tal Cover	Present? Yes No
	1.0	gent in in a dail	
% Bare Ground in Herb Stratum		101 00001	

-	100	84	
-	а в		

Sampling Point:

Depth Matri	×		ox Feature	S				
(inches) / Color (moist	%	Calor (moist)	%	Type'	Loc2	Texture	Remarks	7
0-4 10-16	5/3 00					Siff lock	1200+	1
8-14 10 TR	44100							
							TO:	
			-					
in the second								
							*	
Type: C=Concentration, D=	Declation PM=	Paducad Matrix C	S=Covere	d or Coate	d Sand Gra	ine ² l positi	on: PL=Pore Lining, N	f-Matrix
Hydric Soil Indicators: (Ap					d Sand Gra		for Problematic Hydi	
Histosol (A1)		_ Sandy Redox					luck (A10)	
Histic Epipedon (A2)	_	Stripped Matrix					arent Material (TF2)	
Black Histic (A3)		Loamy Mucky		1) (except	MLRA 1)		hallow Dark Surface (1	F12)
Hydrogen Sulfide (A4)		Loamy Gleyed			1775	The second secon	Explain in Remarks)	200
Depleted Below Dark Su	rface (A11)	Depleted Matri		,				
Thick Dark Surface (A12		Redox Dark Si)		3Indicators	of hydrophytic vegetat	on and
Sandy Mucky Mineral (S		Depleted Dark					hydrology must be pre	
Sandy Gleyed Matrix (S4		Redox Depres		9			isturbed or problemati	
Restrictive Layer (if presen								
Type:								V
Depth (inches):						Hydric Soil Pre	esent? Yes	No
Remarks			100					
YDROLOGY							****	
YDROLOGY Wetland Hydrology Indicate		chack all that gare	ahed.			Seconda	ny Indicators (2 as ma	o ropuland\
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum							ry Indicators (2 or mor	
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1)		Water-Sta	ained Leav		xcept	Wate	er-Stained Leaves (B9	
YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Sta	ained Leav 1, 2, 4A,		xcept	Wate	er-Stained Leaves (B9 A, and 4B)	
YDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta MLRA Salt Crus	ained Leav 1, 2, 4A, (1 (B11)	and 4B)	xcept	Wate 4 Drain	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10)	(MLRA 1, 2
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Sta MLRA Salt Crus Aquatic Ir	ained Leav 1, 2, 4A, t (B11) overtebrate	and 4B) es (B13)	xcept	Wate 4 Drain Dry-:	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table ((MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Str MLRA Salt Crus Aquatic Ir Hydroger	ained Leav 1, 2, 4A, t (B11) overtebrate s Sulfide O	and 4B) es (B13) edor (C1)		Wate Drain Dry-: Satu	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (tration Visible on Aeria	(MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized	ained Leav 1, 2, 4A, and t (B11) nivertebrate n Sulfide O Rhizosphe	es (B13) dor (C1) eres along	Living Roots	Wate Drain Dry-: Satu s (C3) Geor	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (tration Visible on Aeria morphic Position (D2)	(MLRA 1, 2,
Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence	ained Leav 1, 2, 4A, t (B11) avertebrate s Sulfide O Rhizosphe of Reduce	es (B13) dor (C1) eres along ed Iron (C4	Living Roots	Wate Drain Dry-: Satu s (C3) Geor	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (iration Visible on Aeria morphic Position (D2) llow Aquitard (D3)	(MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	of one required;	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir	ained Leav 1, 2, 4A, t (B11) evertebrate s Sulfide O Rhizosphe of Reduce on Reducti	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille	Living Roots 4) d Soils (C6)	Wate Drain Dry-: Satu s (C3) Geor Shal FAC	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (or tration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5)	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	of one required;	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct or Stressed	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (D	Living Roots	Wate A, Drain Dry-t Satu s (C3) Geor Shal FAC Rais	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (contration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (l	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei	of one required;	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted o	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct or Stressed	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (D	Living Roots 4) d Soils (C6)	Wate A, Drain Dry-t Satu s (C3) Geor Shal FAC Rais	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (or tration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5)	(MLRA 1, 2, C2) I Imagery (C9
YDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Cone	of one required;	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted o	ained Leav 1, 2, 4A, t (B11) nvertebrate a Sulfide O Rhizosphe of Reduct or Stressed	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (D	Living Roots 4) d Soils (C6)	Wate A, Drain Dry-t Satu s (C3) Geor Shal FAC Rais	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (contration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (l	(MLRA 1, 2, C2) I Imagery (C9
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ael Sparsely Vegetated Confiled Observations:	of one required; ial Imagery (B7) cave Surface (B	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Stunted of Other (Ex	ained Leav 1, 2, 4A, 1 t (B11) nvertebrate s Sulfide O Rhizosphe of Reduction r Stressed splain in Re	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille I Plants (D emarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate A, Drain Dry-t Satu s (C3) Geor Shal FAC Rais	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (contration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (l	(MLRA 1, 2, C2) I Imagery (C9
YDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ael Sparsely Vegetated Constillations:	of one required; ial Imagery (B7) cave Surface (B	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted o	ained Leav 1, 2, 4A, 1 t (B11) nvertebrate s Sulfide O Rhizosphe of Reduction r Stressed splain in Re	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille I Plants (D emarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate A, Drain Dry-t Satu s (C3) Geor Shal FAC Rais	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (contration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (l	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Cone Field Observations: Surface Water Present?	of one required; rial Imagery (B7) cave Surface (Br Yes N Yes N	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of Other (Ex B) Depth (ir	ained Leav 1, 2, 4A, t (B11) evertebrate a Sulfide O Rhizosphe of Reduction on Reduction or Stressed splain in Re- aches):	es (B13) dor (C1) eres along ed Iron (C4) ion in Tiller I Plants (D emarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate A, Drain Satu Satu Shal FAC Rais Fros	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (oration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (I t-Heave Hummocks (I	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Cone Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	of one required; rial Imagery (B7) cave Surface (B0) Yes N Yes N Yes N	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of Other (Ex B) Depth (ir Depth (ir	ained Leav 1, 2, 4A, t (B11) evertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed eplain in Re- aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (Demarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate 4. Drain Dry- Satu S (C3) FAC Rais Fros	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (contration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (l	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Conficient Observations: Surface Water Present? Water Table Present?	of one required; rial Imagery (B7) cave Surface (B0) Yes N Yes N Yes N	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of Other (Ex B) Depth (ir Depth (ir	ained Leav 1, 2, 4A, t (B11) evertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed eplain in Re- aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (Demarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate 4. Drain Dry- Satu S (C3) FAC Rais Fros	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (oration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (I t-Heave Hummocks (I	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Cone Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	of one required; rial Imagery (B7) cave Surface (B0) Yes N Yes N Yes N	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of Other (Ex B) Depth (ir Depth (ir	ained Leav 1, 2, 4A, t (B11) evertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed eplain in Re- aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (Demarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate 4. Drain Dry- Satu S (C3) FAC Rais Fros	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (oration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (I t-Heave Hummocks (I	(MLRA 1, 2, C2) I Imagery (C9
Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei Sparsely Vegetated Cone Field Observations: Surface Water Present? Water Table Present? Water Table Present? (includes capillary fringe) Describe Recorded Data (streen	of one required; rial Imagery (B7) cave Surface (B0) Yes N Yes N Yes N	Water-Sta MLRA Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent In Stunted of Other (Ex B) Depth (ir Depth (ir	ained Leav 1, 2, 4A, t (B11) evertebrate a Sulfide O Rhizosphe of Reduct on Reduct or Stressed eplain in Re- aches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tilled I Plants (Demarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Wate 4. Drain Dry- Satu S (C3) FAC Rais Fros	er-Stained Leaves (B9 A, and 4B) nage Patterns (B10) Season Water Table (oration Visible on Aeria morphic Position (D2) llow Aquitard (D3) -Neutral Test (D5) ed Ant Mounds (D6) (I t-Heave Hummocks (I	(MLRA 1, 2, C2) I Imagery (C9

WETLAND DETERMINATION D	ATA FOR	M - Western Mou	ntains, Valleys, and Coast Region
Project/Site: McCole, who Tour Cal		City/County: Miles le	12/4/ HUM Sampling Date: 5/30/2023
Applicant/Owner: Cast, of Huseld+			State: CA Sampling Point: 111-W
A			nge:
Landform (hillslope, terrace, etc.): Min Jeran			
Subregion (LRR):	1.44. 41.	Local relief (concave, t	Long 171,109 347 Datum: MAV 88
	Lar0	17.44 3107 1	
Soil Map Unit Name:		· · · ·	NWI classification:
Are climatic / hydrologic conditions on the site typical for the			
Are Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	oblematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampling point le	ocations, transects, important features, etc.
Hydric Soil Present? Yes	No No	Is the Sampled within a Wetlan	
Remarks: W11 parameter with	d.		
Ver blot and	- 100	suctine lovel on	directors of Welly hydrology
		miller . co of 11	MI LINGUIS DI SOSSILA VILANIKAYLA
VEGETATION - Use scientific names of pla		Barrier L. F. Barrier	
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species
1			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3.			Species Across All Strata: (B)
4	-		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: (= 15)	-	_= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. 96 lit Wole who	25	YES FAIRW	Prevalence Index worksheet:
2. 50 miles drullsinge	20	VIS FACE	Total % Cover of: Multiply by:
3.			OBL species X1 = 6
4.			FACW species <u>53</u> x2= <u>106</u> FAC species <u>35</u> x3= 165
5			1.0 160
Hat Olerhair (District Co. C.	45	= Total Cover	UPL species
1. Anthoranda other	311	yes FAru	Column Totals: 136 (A) 403 (B)
2. Holas lantes	20	115 FAC	Prevalence Index = B/A = 2.90
3. H-, prockruss radrate	5	FALL	Hydrophytic Vegetation Indicators:
4. Prisily produs.	3	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Suras historias	3	FACW	× 2 - Dominance Test is >50%
6. HESACK " C TAC! 1.7	5	FALL	¥ 3 - Prevalence Index is ≤3.01 = 2.960 PASS
7. Ranuau (12) oph 3	_15	FAC	4 - Morphological Adaptations (Provide supporting
8. Kure = Eutor 1 He	_ 5	FACU	data in Remarks or on a separate sheet)
9,	-		5 - Wetland Non-Vascular Plants
10			Problematic Hydrophytic Vegetation¹ (Explain)
11	- 31	= Total Cover 70's - 4t	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	- 01	= Total Cover 70's	
1. albuy aging	5_	BYRS FACIL	Hydrophytic
2			Vegetation /
% Bare Ground in Herb Stratum	-5	_= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum			
nomana.		DUNTED TO	1 -1 or
		PASSES DOM-10	T ap 11

WETLAND DETER Project/Site: Mc/Gn/Lyulle (Q	11				
Project/Site: MICKNIPULU (U	4) Chor	1	City/County: VI OR	1 1 1	Sampling Date: 5/30/207
Applicant/Owner: Con - c	if the buld				Sampling Point: 1/2 1/4
nvestigator(s): M/ /-			Section, Township, R	ange:	
andform (hillslope, terrace, etc.): _ h					Slope (%): 0
Subregion (LRR):		Lat: 40	943910	Long: -124,1081	7 Datum: N.183
Soil Map Unit Name:	~			NWI classifi	cation:
Are climatic / hydrologic conditions on the	ne site typical for t	his time of vea	ar? Yes No	(If no, explain in I	Remarks.)
Are Vegetation, Soil, or					present? Yes X No
Are Vegetation, Soil, or				needed, explain any answ	
SUMMARY OF FINDINGS - A	ttach site maj	p snowing	sampling point	locations, transect	s, important reatures, etc
Hydrophytic Vegetation Present?	Yes	No X	In the County	4404	
Hydric Soil Present?	Yes		Is the Sample within a Wetl	and? Yes	No.X
Wetland Hydrology Present?	Yes	NoA_	***************************************		
Remarks:					
	2000	40			
VEGETATION - Use scientific	names or pla			12	
Tree Stratum (Plot size; (=3/1)	Absolute % Cover	Dominant Indicator Species? Status		1
1. Don's condicta		40	405 FAL	 Number of Dominant S That Are OBL, FACW 	
2.					
3.				Total Number of Domi Species Across All Str	10 5 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10
4.					
	/	uo	= Total Cover	Percent of Dominant S That Are OBL, FACW	
Sapling/Shrub Stratum (Plot size:	219_)			Prevalence Index wo	
1				Total % Cover of:	
2				OBL species 6	x1= G
3				FACW speciesO	
4				FAC species	x3= 135
5		7	= Total Cover	FACU species	x4= 324
Herb Stratum (Plot size: CS)	_	= 1 otal Cover	UPL species	X3- U
1. lipersion aguilistus		70	yes FACU	Column Totals:	26 (A) 459 (B)
2. Anthoxa Mu adeaton		8.	118 ALCH	Prevalence Inde	x = B/A = 3-64
3. Holas Invates		_ 5	FAC	Hydrophytic Vegetat	ion Indicators:
4. Hiphicians radial	4	3.	FAIL	1 - Rapid Test for	Hydrophytic Vegetation
5	10:			2 - Dominance Te	st is >50% FeV
6				3 - Prevalence Inc	lex is ≤3.0' Fa.1
7				4 - Morphological	Adaptations' (Provide supporting
8					ks or on a separate sheet)
9				5 - Wetland Non-	
10					ophytic Vegetation ¹ (Explain)
11		11	9%-		oil and wetland hydrology must turbed or problematic.
Woody Vine Stratum (Plot size:	-15	36	= Total Cover	2	
1. Rubus welling		55	yes face	Hydrophytic	
2.				Manatatian	· · · · · ·
Duss		55	= Total Cover	Present? Y	es No
% Bare Ground in Herb Stratum		100	S. M. C. Market		
Remarks:					

Profile Description: (Describ Depth Matrix		Pode	x Features							
(inches) Color (moist)	% (Color (moist)		Type1	Loc ²	Textu	re		Remarks	
0-14- 10-13/3	100				-	(00)	~			
EUO 1		1 1								
LNY						-				_
						-				
									700	
There CoConnected to Don		durand Mateiu CO			4 54 6-		21	n Di -D-	and Ottobal A	
Type: C=Concentration, D=D Hydric Soil Indicators: (Appl					a Sana Gr				ore Lining, M matic Hyd	
	icable to all Like			u.,		Inic			The second second	ic sons .
Histosol (A1)	_	Sandy Redox (7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			_		ick (A10)		
Histic Epipedon (A2)	_	Stripped Matrix		\	MI DA 4V	_	Red Par			FE42)
Black Histic (A3)	_	Loamy Mucky N	The second secon		MLRA 1)	_			k Surface (*	11-12)
Hydrogen Sulfide (A4)		Loamy Gleyed	The second second			-	Other (E	xpiain in	Remarks)	
 Depleted Below Dark Surface (A12) 	ace (A11)	Depleted Matrix Redox Dark Su				3100	dicators of	Fhydrank	ytic vegetat	ion and
Sandy Mucky Mineral (S1)	_	Depleted Dark		71					ytic vegetat must be pre	
Sandy Gleyed Matrix (S4)	-	Redox Depress	the second second second second	.,					problemati	
Restrictive Layer (if present)		Nedux Depiess	sions (1 o)			1	unicaa uia	starbea or	problemati	-
Type:		-							1.5	No/XX
A. Carlotte and the second								cont/	Yes	
Depth (inches):						riyunc	Soil Pre			NUJ
Depth (inches)Remarks:	s:					nyunc	, Soll Pre	SUNT		NUJS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator		neck all that appl	iv)							re required)
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o				es (B9) (e	xcept		Secondary	y Indicato	rs (2 or mo	re required)
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1)		Water-Sta	ined Leave		xcept		Secondar Water	y Indicato -Stained	rs (2 or moi Leaves (B9	re required)
Depth (inches)		Water-Sta	ined Leave 1, 2, 4A, aı		xcept		Secondar Water	y Indicato -Stained	rs (2 or mo Leaves (B9	re required)
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta MLRA Salt Crust	ined Leave 1, 2, 4A, ai (B11)	nd 4B)	xcept		Secondary Water 4A Drain:	y Indicato -Stained a, and 4B	rs (2 or mo Leaves (B9) rns (B10)	re required)) (MLRA 1, 2
Depth (inches)		Water-Sta MLRA Salt Crust Aquatic In	ined Leave 1, 2, 4A, ar (B11) vertebrates	nd 4B) s (B13)	xcept		Secondari Water 4A Draina Dry-S	y Indicato -Stained a, and 4B age Patte eason Wi	rs (2 or mo Leaves (B9) rns (B10) ater Table (re required)) (MLRA 1, 2
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leave 1, 2, 4A, an (B11) vertebrates Sulfide Odd	nd 4B) s (B13) for (C1)			Secondari Water 4A Draina Dry-S	y Indicato -Stained a, and 4B age Patte eason Wa	rs (2 or mor Leaves (B9) rns (B10) ater Table (ole on Aeria	re required)) (MLRA 1, 2
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leave 1, 2, 4A, au (B11) vertebrates Sulfide Od Rhizosphere	nd 4B) s (B13) or (C1) res along	Living Roo		Secondary Water 4A Drain: Dry-S Satura	y Indicato -Stained a, and 4B age Patte eason Wi ation Visil	rs (2 or mo Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2)	re required)) (MLRA 1, 2
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave 1, 2, 4A, at (B11) vertebrates Sulfide Odi Rhizosphero of Reduced	nd 4B) s (B13) for (C1) res along d Iron (C4)	Living Roo	ots (C3)	Secondary Water 4A Drains Dry-S Saturs Geom	y Indicato -Stained a, and 4B age Patte eason Wa ation Visit orphic Po w Aquita	rs (2 or mo Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3)	re required)) (MLRA 1, 2
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave 1, 2, 4A, an (B11) vertebrates Sulfide Od- Rhizosphero of Reduced on Reduction	ond 4B) s (B13) for (C1) es along d Iron (C4 on in Tille	Living Roo I) d Solls (C6	its (C3)	Secondary Water 4A Drain: Dry-S Sature Geom Shallo	y Indicato -Stained a, and 4B age Patte eason Wa ation Visit horphic Po w Aquita Neutral Te	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5)	re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	f one required, ch	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted o	ined Leave 1, 2, 4A, and (B11) vertebrates Sulfide Odi Rhizospheri of Reduced on Reduction r Stressed f	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5) unds (D6) (re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria	f one required, ch	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted o	ined Leave 1, 2, 4A, an (B11) vertebrates Sulfide Od- Rhizosphero of Reduced on Reduction	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5)	re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca	f one required, ch	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted o	ined Leave 1, 2, 4A, and (B11) vertebrates Sulfide Odi Rhizospheri of Reduced on Reduction r Stressed f	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5) unds (D6) (re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeric Sparsely Vegetated Conca	f one required, ch al Imagery (B7) ave Surface (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Ex	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Od- Rhizospherr of Reduced on Reduction r Stressed fi plain in Rer	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5) unds (D6) (re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeric Sparsely Vegetated Conca	al Imagery (B7) ave Surface (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odi Rhizospheri of Reduced in Reductio r Stressed f plain in Rer	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5) unds (D6) (re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria	f one required, ch al Imagery (B7) ave Surface (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Od- Rhizospherr of Reduced on Reduction r Stressed fi plain in Rer	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo I) d Solls (C6	its (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato -Stained a, and 4B age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo	rs (2 or more Leaves (B9) rns (B10) ater Table (ple on Aeria position (D2) rd (D3) est (D5) unds (D6) (re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present?	al Imagery (B7) ave Surface (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Irc Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Ode Rhizospherr of Reduced on Reduction r Stressed f plain in Rer ches):	nd 4B) s (B13) or (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo i) d Soils (C6 1) (LRR A)	ots (C3)	Secondan Water 4A Draina Dry-S Satura Geom Shallo FAC-I Raise	y Indicato c-Stained age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo Heave He	rs (2 or mor Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2) rd (D3) est (D5) unds (D6) (ummocks (I	re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of the content of	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odi Rhizospherr of Reduced on Reduction r Stressed f plain in Rer ches): ches): ches):	nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	and Hydr	Secondan Water 4A Drain: Dry-S Satur: Geom Shallo FAC-I Raise Frost-	y Indicato c-Stained age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo Heave He	rs (2 or mor Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2) rd (D3) est (D5) unds (D6) (ummocks (I	re required)) (MLRA 1, 2 C2) Il Imagery (C9
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odi Rhizospherr of Reduced on Reduction r Stressed f plain in Rer ches): ches): ches):	nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	and Hydr	Secondan Water 4A Drain: Dry-S Satur: Geom Shallo FAC-I Raise Frost-	y Indicato c-Stained age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo Heave He	rs (2 or mor Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2) rd (D3) est (D5) unds (D6) (ummocks (I	re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (streat	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odi Rhizospherr of Reduced on Reduction r Stressed f plain in Rer ches): ches): ches):	nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	and Hydr	Secondan Water 4A Drain: Dry-S Satur: Geom Shallo FAC-I Raise Frost-	y Indicato c-Stained age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo Heave He	rs (2 or mor Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2) rd (D3) est (D5) unds (D6) (ummocks (I	re required)) (MLRA 1, 2 C2) Il Imagery (CS
Depth (inches) Remarks: IYDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of the content of	al Imagery (B7) ave Surface (B8) Yes No Yes No	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, ar (B11) vertebrates Sulfide Odi Rhizospherr of Reduced on Reduction r Stressed f plain in Rer ches): ches): ches):	nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	and Hydr	Secondan Water 4A Drain: Dry-S Satur: Geom Shallo FAC-I Raise Frost-	y Indicato c-Stained age Patte eason Wa ation Visil norphic Po ow Aquita Neutral Te d Ant Mo Heave He	rs (2 or mor Leaves (B9) rns (B10) ater Table (ple on Aeria psition (D2) rd (D3) est (D5) unds (D6) (ummocks (I	re required)) (MLRA 1, 2 C2) Il Imagery (CS

WETLAND DETERMINATION D.	ATA FORM -	Western Mou	intains, Valleys, and Coast Region
Project/Site: Mc Kulyalle City Couty	. City/	County: Mr. 61	eralle/HUM_ Sampling Date: 5/30
Applicant/Owner: Create, of Hisport	4		State: A Sampling Point: 1/3-U
nvestigator(s): MH, 11+	Sect		inge:
andform (hillslope, terrace, etc.): Maran Hole			4 5 6
			Long _124.101576 Datum: NASS
oil Map Unit Name:			NWI classification
re climatic / hydrologic conditions on the site typical for th	is time of year? '	Yes X No	
re Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology	naturally problem		eeded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site man	showing sar	molina point l	ocations, transects, important features, etc.
Hydrophytic Vegetalion Present? Yes			The state of the s
3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	No	Is the Sampled	i Area
Netland Hydrology Present? Yes	No	within a Wetlan	nd? Yes No
Remarks:		11.	
veg plot only w	o shith "	Mangam de	
EGETATION – Use scientific names of pla	nte C	x vgvarva	7
		minant Indicator	Dominance Test worksheet:
Free Stratum (Plot size:	% Cover Spi		Number of Dominant Species
			That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant
) ()			Species Across All Strata: (8)
N.	= To	otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: [A/B]
Sapling/Shrub Stratum (Ptot size:)	70 5	1 EM	Prevalence Index worksheet:
Salit hopfying		120	Total % Cover of: Multiply by:
[-12,516 5100ctos		Y UPL	OBL species O x1= O
·			FACW species <u>70</u> x2 = <u>40</u>
5.			FAC species 38 x3= 114
	22 = To	otal Cover	FACU species $9^2 \times 4 = 372$
lerb Stratum (Plot size:)	27	Y FAU	UPL species $\frac{2}{153}$ x 5 = $\frac{16}{536}$ (B)
HOLLE GALLE	25	V FA/	Column Totals: 155 (A) 536 (B)
DOL OTALL	3	V PAC	Flevaletice thoex - D/A -
It you'll bedien	8	N FACU	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
te tolich tonger	10	N PAC	2 - Dominance Test is >50% Fa.\
4		1	3 - Prevalence Index is ≤3.0¹ Fo.¹\
			4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
).			5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain)
0			*Indicators of hydric soit and wetland hydrology must
1	73 = To	tal Cover_	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:	E()	Y PNU	/
To Jul Oxtive	18	1 100	Hydrophytic
			Vegetation
2.			
2	58 = TO	tal Cover	Present? Yes No

WETLAND DETERMINA	TION DATA FORM	i – Western Mou	ntains, Valleys, and Coast Region
Project/Site: McConlywlh Coly Co	24.	city/County Alih/	will HUM Sampling Date: 5/30/202
Applicant/Owner: Carty of 14.	1 1 4	and the second s	State: CA Sampling Point: 114 - IM
Investigator(s): MU, (H			nge:
			convex, none): Slavu Slope (%): 3 - 8
	Lat: <u>10</u>		Long: 174.107755 Datum: NAS3
Soil Map Unit Name:	and the same of the same	THE RESERVE OF THE PARTY OF THE	NWI classification:
Are climatic / hydrologic conditions on the site ty			가게 하는 것이 되었다. 이 교육은 경기에서 보면 되었다. 그런 그리고 있다면 가지 않는 것이 없는 것이 없다. 그리고 있다면 보다 다른 사람들이 되었다. 그리고 있다면 보다 되었다. 그리고 있다면 다른 사람들이 되었다면 보다 되었다면 되었다면 보다 되
Are Vegetation, Soil, or Hydrolog			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrolog	y naturally prof	olematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach s	ite map showing	sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No X		Land Table 1
	No X	Is the Sampled	The state of the s
	No	within a Wetlar	id? YesNo
Remarks:	,		
	20.00		
VEGETATION – Use scientific names		A	
Tree Stratum (Plot size: 530)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species
1			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
4.			Percent of Dominant Species 200/
Sapling/Shrub Stratum (Plot size: V=/	:/	= Total Cover	That Are OBL, FACW, or FAC: 33 (A/B)
Sapling/Shrub Stratum (Plot size:			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3.			OBL species x 1 =
4.			FACW species x 2 =
5.			FAC species 25 x 3 = 75
Herb Stratum (Plot size: V35		= Total Cover	FACU species 0 $x = 4$ $y = 4$
Herb Stratum (Plot size: V 35)	1/00	or Tack	init — mi
1. Anthora nu shorte	70	X49 HOVY	
2. Planthy lancelete	<u> </u>	Y/5 FAC	Prevalence Index = B/A = 3.76
4. Hypochions carticate		FACY.	Hydrophytic Vegetation Indicators:
5. I Wan bothe biene	3	UPL	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% FV
6. Cernstan Entarum	3	FALLA	3 - Prevalence Index is ≤3.01 Faul
7. Lotto retinonossis	5	FAC	4 - Morphological Adaptations (Provide supporting
8.			data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11,			Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 15	99	= Total Cover 20%-18	be present, unless disturbed or problematic.
	30	VII EACH	
1. Rubis wanus		TACU.	Hydrophytic Vegetation
£.	31	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum		- 10(0) 00/61	
Remarks:			

Profile Description: (Description: Matri	Y.	Redo	x Feature	S			
inches) Color (moist)		Color (moist)			_Loc2	Texture	Remarks
1-14 10vc3/3	100				A 1 hr	100-	
END		,					
VF .			1				
		-					
							-
	1						
-			-				
2 2 - 2			-	V-12-3	72.772	. 2.	N 2 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1
Type: C=Concentration, D=I lydric Soil Indicators: (App					d Sand Gra		ation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
	JIICADIE (U AI			eu.,			
_ Histosol (A1) _ Histic Epipedon (A2)		Sandy Redox (Muck (A10) Parent Material (TF2)
Black Histic (A3)		Loamy Mucky I		1) /except	MI RA 1)		Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)		Loamy Gleyed			in the state of		r (Explain in Remarks)
Depleted Below Dark Sur	face (A11)	Depleted Matrix		-)		Ouic	(Cxplain in Nemarka)
Thick Dark Surface (A12)	The second secon	Redox Dark Su)		3Indicator	s of hydrophytic vegetation and
Sandy Mucky Mineral (S		Depleted Dark					d hydrology must be present,
Sandy Gleyed Matrix (S4		Redox Depress	Land of the same of the same				disturbed or problematic.
estrictive Layer (if present							
Type:							12
							Present? Yes No
Depth (inches):						Hydric Soil I	
Depth (inches): lemarks:						Hydric Soil I	103
YDROLOGY						Hydric Soil I	103
YDROLOGY Vetland Hydrology Indicato	ors:						
YDROLOGY Vetland Hydrology Indicato	ors:	ed; check all that app	iy)			Secon	dary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicato	ors:	ed; check all that appl		ves (B9) (e	xcept	Secon	dary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum	ors:	Water-Sta			xcept	Secon	dary Indicators (2 or more required)
YDROLOGY Vetland Hydrology Indicator rimary Indicators (minimum Surface Water (A1)	ors:	Water-Sta	ined Leav 1, 2, 4A,		xcept	Second	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Vetland Hydrology Indicator Trimary Indicators (minimum Surface Water (A1) High Water Table (A2)	ors:	Water-Sta	ined Leav 1, 2, 4A, (B11)	and 4B)	xcept	<u>Secon</u>	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	ors:	Water-Sta MLRA Salt Crust	ined Leav 1, 2, 4A, (B11) vertebrate	and 4B) es (B13)	xcept	<u>Second</u> W: Dr Dr	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ors:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O	and 4B) es (B13) dor (C1)	xcept	Second Will Dr Dr Sa	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ors:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe	and 4B) es (B13) dor (C1) eres along	Living Roo	Second W: Dr Dr Dr Sa as (C3) Ge	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ors:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduce	and 4B) es (B13) dor (C1) eres along ed Iron (C4)	Living Roo	Second Wi Dr Dr Sats (C3) Ge Sh	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct	es (B13) dor (C1) eres along ed Iron (C4) ion in Tille	Living Roo	Second W: Dr Dr Sa ts (C3) Ge Sh Sh	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 and the comorphic Position (D2) allow Aquitard (D3)
YDROLOGY Netland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressec	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille d Plants (D	Living Roo 4) d Soils (C6	Second Will Dr Dr Sa Sts (C3) Ge Sh FA Ra	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressec	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille d Plants (D	Living Roo 4) d Soils (C6	Second Will Dr Dr Sa Sts (C3) Ge Sh FA Ra	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aer Sparsely Vegetated Cond	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressec	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille d Plants (D	Living Roo 4) d Soils (C6	Second Will Dr Dr Sa Sts (C3) Ge Sh FA Ra	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
POROLOGY Vetland Hydrology Indicator Indicators (Minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeron Sparsely Vegetated Control (B4) Irol Observations:	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Ex	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tille d Plants (D	Living Roo 4) d Soils (C6 1) (LRR A)	Second Will Dr Dr Sa Sts (C3) Ge Sh FA Ra	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeronal Sparsely Vegetated Control (B4) Seurface Water Present?	ors: of one require ial Imagery (E cave Surface	Water-Sta	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re	and 4B) es (B13) edor (C1) eres along ed Iron (C4) ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second Will Dr Dr Sa Sts (C3) Ge Sh FA Ra	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aei	ial Imagery (Ecave Surface Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex (B8) No Depth (in	ined Leaven 1, 2, 4A, (B11) vertebrate Sulfide Of Reduction Reductor Stressed plain in Reductor Stress	and 4B) es (B13) edor (C1) eres along ed Iron (C- ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second Wi Dr Sa als (C3) Ge Sh FA Fr	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 amorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeron Sparsely Vegetated Concreted Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Present?	ors: of one require ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Is Presence Recent Iro Stunted o Stunted o Other (Ex (B8) No Depth (in No Depth (in	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re ches): ches): ches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second With Dr Dr Sals (C3) — Ge Sh FA Free and Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLOGY Vetland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aero Sparsely Vegetated Constitutions: Surface Water Present? Vater Table Present?	ors: of one require ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Is Presence Recent Iro Stunted o Stunted o Other (Ex (B8) No Depth (in No Depth (in	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re ches): ches): ches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second With Dr Dr Sals (C3) — Ge Sh FA Free and Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 and the Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aer Sparsely Vegetated Concessive Co	ors: of one require ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Is Presence Recent Iro Stunted o Stunted o Other (Ex (B8) No Depth (in No Depth (in	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re ches): ches): ches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second With Dr Dr Sals (C3) — Ge Sh FA Free and Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 amorphic Position (D2) allow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeron Sparsely Vegetated Concreted Observations: Surface Water Present? Saturation Present? Saturation Present? Saturation Present?	ors: of one require ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Is Presence Recent Iro Stunted o Stunted o Other (Ex (B8) No Depth (in No Depth (in	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O Rhizosphe of Reduct on Reduct r Stressed plain in Re ches): ches): ches):	and 4B) es (B13) dor (C1) eres along ed Iron (C4) ion in Tille d Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Second With Dr Dr Sals (C3) — Ge Sh FA Free and Hydrology	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 and the Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)

WETLAND DETERMINATION I	DATA FORM -	- Western Mou	ntains, Valleys, and Coast Region
Project/Site: Mclanly, Ml Cot, Cut	City	County: Motol	single Auch Sampling Date: 5/30/23
Applicant/Owner Carticis Highest			State: 6 Sampling Point: 15-4
nvestigator(s): MH, CH	Sec		nge:
andform (hillslope, terrace, etc.): who we terra-	1 100	cal relief (concave)	Sinne (%). 0 =
Subregion (LRR):	40.	944714	Long: -124 107060 Datum A ASS
//	Lat		
Soil Map Unit Name:	A Pharma Samuel	-	NWI classification:
are climatic / hydrologic conditions on the site typical for			(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology			Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology	_ naturally proble	matic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ıp showing sa	impling point lo	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present?		Is the Sampled within a Wetlan	
Manager A and a second a secon	No	Within a Weban	100 2
Remarks:	VI C. L.	11.11	
veg plot only	, NO Salar	Toda by a	+ hartelour
/EGETATION – Use scientific names of pl		TAGILIA	
/EGETATION - Use scientific flames of pr	77 1215	ominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		pecies? Status	Number of Dominant Species
1. Alnes (LD/G	93	Y FAL	That Are OBL, FACW, or FAC:(A)
2. 1/15. 10-tarte	4	N FAC	Total Number of Dominant
3			Species Across All Strata: (B)
4	-0-		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:	<u> </u>	Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. 15 Lb 65 5 P 8C+5 h.1111	27	Y FAC	Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species x1=
4			FACW species O $x2 = O$ FAC species 125 $x3 = 375$
5			FAC species
Land Inc.	27 =	Total Cover	UPL species O x5= 6
Herb Stratum (Plot size:	23	Y FALL	Column Totals: 2/8 (A) 797 (B)
2 HTDFILL CEDICALE	7	Y FACU	
3. Plantin landele	3	N FACU	Prevalence Index = B/A = 3 43 Hydrophytic Vegetation Indicators:
4. Flibria ICDET	1	N EAC	1 - Rapid Test for Hydrophytic Vegetation
5.			2 - Dominance Test is >50% [a]
6.			3 - Prevalence Index is ≤3.0' 12.1
7			4 - Morphological Adaptations (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11	The A		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	- M-T=1	Total Cover	
1. Eubel Ursiver	53	1 FACU	Hydrophytic
2			Vegetation
	53 =	Total Cover	Present? Yes No
% Bare Ground in Herb Stratum			
Remarks:			

WETLAND DETE	ERMINATION	V DATA FOR	M – Western I	Mountains, Valleys, and Coast Region
Project/Site: Mcknhyulle C	-1-11			Wante wh / HUM Sampling Date: 5/30/2003
	P 1 1 1 .		City/County:/	
Applicant/Owner: (att) 0			13.05	State: A Sampling Point: 11016-6
nvestigator(s): Miler Hub			Section, Township	
				ave, convex, none): + la + Slope (%): > - 8
Subregion (LRR):	-)	Lat:	0.946,510	Long: 124, 1059(01) Datum: 188
oil Map Unit Name:	//			NWI classification:
re climatic / hydrologic conditions on		for this time of vea	ar? Yes	No (If no, explain in Remarks.)
re Vegetation, Soil, o				Are "Normal Circumstances" present? Yes No
re Vegetation, Soil, o				(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site r	nap showing	sampling po	int locations, transects, important features, etc
Hydrophytic Vegetation Present?	Yes	No X		1.41
Hydric Soil Present?		No X	The second secon	pled Area /etland? Yes No
Wetland Hydrology Present?	Yes	_ No _) Within a w	resNU
Remarks:				
	200	-		
/EGETATION - Use scientifi	ic names or			
Tree Stratum (Plot size:	4	Absolute % Cover	Dominant Indica Species? State	
1. Privis radida		15	V43 1118	That Are OBL. FACW. or FAC: (A)
2. Alaus rulia		3	TA DE	A STATE OF THE STA
3				Total Number of Dominant Species Across All Strata: (B)
4,				
		18.	= Total Cover 70	Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)
Sapling/Shrub Stratum (Plot size:		A		December of Index weekshoots
1. Simble y raceno			- FA	Total % Cover of: Multiply by:
2				OBL species x1=0
3				FACW species x 2 =
4				FAC species 45 x3= 135
5			≈ Total Cover	FACU species 84 ×4= 334
Herb Stratum (Plot size:				UPL species 33 x5= 145
1. An America Man alos	An	3,02	VRS FAC	U Column Totals: 162 (A) 636 (B)
2. Hilaus landers		1.0	FA	Prevalence Index = B/A = 393
3. Cytish's Scogning		15.	Max Mo	Hydrophytic Vegetation Indicators:
4. Galun morris		5	FA	1 - Rapid Test for Hydrophytic Vegetation
5. Gramin dosedin	1.5	3		PL _ 2 - Dominance Test is >50% Fa. 1
6. Ourman robrian	da	3.	- EAG	
7. Kindy Carry			FA	4 - Morphological Adaptations (Provide supporting
8. Plerida gullinu	h	5	FA	
9. James por		15	yes FA	5 - Wetland Non-Vascular Plants
10. Por pouter, 5		8		Problematic Hydrophytic Vegetation¹ (Explain)
11	_		- M	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	Υ.	95	= Total Cover	-19
1. Kinha alson		40	195 EAC	
2. Richas Gimarinas		8	FA	
Tricked 3 White	-	48	= Total Cover 57%	Possest2 Vac No
% Bare Ground in Herb Stratum	٧	177		ti-fix

Depth Matrix	(Redo	x Feature	S			
(inches) Color (moist) F(1)() Color (moist) (inches) Color (moist)		Color (moist)	%	Type	Loc²	Texture	Remarks
Type: C=Concentration, D=E Hydric Soil Indicators: (App — Histosol (A1) — Histic Epipedon (A2) — Black Histic (A3) — Hydrogen Sulfide (A4) — Depleted Below Dark Sur	olicable to all	LRRs, unless othe Sandy Redox (Stripped Matrix Loamy Mucky N Loamy Gleyed Depleted Matrix	rwise not S5) (S6) Mineral (F Matrix (F2 ((F3)	ed.) 1) (excep		Indicators 2 cm N Red Pi Very S Other	ion: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: fluck (A10) arent Material (TF2) shallow Dark Surface (TF12) (Explain in Remarks)
Thick Dark Surface (A12)		Redox Dark Su					of hydrophytic vegetation and
 Sandy Mucky Mineral (S1 Sandy Gleyed Matrix (S4 		Depleted Dark Redox Depress		()			hydrology must be present, disturbed or problematic.
Restrictive Layer (if present		nedux Depress	ions (F8)		-	unless (asturbed of problematic.
Type:	1.						
	What are					Hydric Soil Pr	resent? Yes No V
Depth (inches):		<u></u>				Hydric Soil Pr	resent? Yes No
Depth (inches):Remarks: YDROLOGY Wetland Hydrology Indicato	rs:	ed: check all that appl	v)				
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum of	rs:			es (B9) (s	xcept	Seconda	ary Indicators (2 or more required)
Depth (inches):Remarks: YDROLOGY Wetland Hydrology Indicato	rs:	Water-Sta			xcept	Seconda Wat	
Depth (inches):	rs:	Water-Sta	ined Leav 1, 2, 4A, a		xcept	Seconds Wat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2,
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicator Primary Indicators (minimum of the content of the con	rs:	Water-Sta	ined Leav 1, 2, 4A, a (B11)	and 4B)	xcept	Seconda Wat Drai	ary Indicators (2 or more required) er-Stained Leaves (B9) (MLRA 1, 2,
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicato Primary Indicators (minimum of the color) Surface Water (A1) High Water Table (A2) Saturation (A3)	rs:	Water-Sta MLRA Salt Crust	ined Leav 1, 2, 4A, a (B11) vertebrate	and 4B) es (B13)	xcept	Seconda Wat Drai Dry-	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 14, and 4B) inage Patterns (B10)
Depth (inches):	rs:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, i (B11) vertebrate Sulfide O Rhizosphe	and 4B) es (B13) dor (C1) eres along	Living Roots	Seconda Wat Drai Dry- Satu s (C3) Geo	ary Indicators (2 or more required) Per-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Per-Stained Leaves (B10) Per-Stained
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	rs:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, i (B11) vertebrate Sulfide O Rhizosphe of Reduce	es (B13) dor (C1) res along ed Iron (C	Living Roots	Seconda Wat Drai Dry- Satu s (C3) Geo Sha	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 1A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2)
Print Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	rs:	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leav 1, 2, 4A, i (B11) vertebrate Sulfide O Rhizosphe of Reduce in Reducti	es (B13) dor (C1) res along ed Iron (C- ion in Tille	Living Roots 4) d Soils (C6)	Seconds Wat Drai Dry Satu s (C3) Geo Sha FAC	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C9) turation Position (D2) turation Aquitard (D3) C-Neutral Test (D5)
Depth (inches):	ors: of one require	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (C- ion in Tille Plants (C	Living Roots	Seconds Wat Drai Dry Satu s (C3) Sha FAC Rais	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C5) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Depth (inches):	ors: of one require	Water-Sta	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (C- ion in Tille Plants (C	Living Roots 4) d Soils (C6)	Seconds Wat Drai Dry Satu s (C3) Sha FAC Rais	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C9) turation Position (D2) turation Aquitard (D3) C-Neutral Test (D5)
Primary Indicators (minimum of the primary Indicators (Mariana of the primary Indicato	ors: of one require	Water-Sta	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (C- ion in Tille Plants (C	Living Roots 4) d Soils (C6)	Seconds Wat Drai Dry Satu s (C3) Sha FAC Rais	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C5) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aer Sparsely Vegetated Conditions	ors: of one require ial Imagery (E	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Ex	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) res along ed Iron (C- ion in Tille Plants (C	Living Roots 4) d Soils (C6)	Seconds Wat Drai Dry Satu s (C3) Sha FAC Rais	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C5) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Process Pro	ors: of one require ial Imagery (Ecave Surface Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or Other (Ex	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) eres along ed Iron (C- ion in Tille Plants (C ernarks)	Living Roots 4) d Soils (C6)	Seconds Wat Drai Dry Satu s (C3) Sha FAC Rais	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C5) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Depth (inches):	ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or Other (Ext	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re ches): ches): ches):	es (B13) dor (C1) eres along ed Iron (C- tion in Tille Plants (D ermarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Seconda Wat Mat Drai Dry- Satu Sha FAC Rais Fros	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C5) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Depth (inches):	ial Imagery (Ecave Surface Yes Yes Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or Other (Ext	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O Rhizosphe of Reduce on Reducti r Stressed plain in Re ches): ches): ches):	es (B13) dor (C1) eres along ed Iron (C- tion in Tille Plants (D ermarks)	Living Roots 4) d Soils (C6) 1) (LRR A)	Seconda Wat Mat Drai Dry- Satu Sha FAC Rais Fros	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) tinage Patterns (B10) -Season Water Table (C2) turation Visible on Aerial Imagery (C9) turation Position (D2) tillow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

roject/Site: M(G)(G)(G)(G)(G)(G)(G)(G)(G)(G)(G)(G)(G)(State: Sampling Point:
pplicant/Owner:	ange: State: CQ Sampling Point:
vestigator(s): WH, CH Section, Township, R andform (hillslope, terrace, etc.): Wrander Heller Local relief (concave ubregion (LRR): Lat: LO 44452	ange:
andform (hillslope, terrace, etc.): Acra Lerral Local relief (concave ubregion (LRR): Lat:	convex, none): NON Slope (%): 0
oil Map Unit Name:Lat:Lat:Lat:Lat:	LUTIVEX, HUTTET, 11
oil Map Unit Name:	2 Long: -124.104 99 Datum: NA 80
	NWI classification:
	"Normal Circumstances" present? Yes X No
	needed, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site map showing sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sample within a Wetland	
Pamarke:	
veg plot only -vo guten un	I h. Arolugy
	a comment
EGETATION – Use scientific names of plants. Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:	Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
	Total Number of Dominant
3	. Species Across All Strata: (B)
= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 230/6 (A/B)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species _ 6 _ x1 =
3	FACW species x 2 =
5.	FAC species ZG x3 = 78
= Total Cover 0	FACU species $\frac{g_U}{g_U} \times 4 = \frac{90344}{2}$
Herb Stratum (Plot size:	UPL species
2 TIHOULS PARTS 1 TINGS	
MI JUNO I I - MOTHER OF ME PENNIN	Flevalence index - DIA
4 Trisola Arabaca 5 N FACU	- Hydrophytic vegetation indicators:
5 HIDEVILLE TILLIEN 5 N FALL	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 15
6. Hallor leveter 5 N PAL	3 - Prevalence Index is \$3.0 \(\frac{1}{5} \)
7. 120 mex sillotills 5 U Face	4 - Morphological Adaptations (Provide supporting
B	data in Remarks or on a separate sheet)
9	5 - Wetland Non-Vascular Plants
10	Problematic Hydrophytic Vegetation (Explain)
11	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) = Total Cover	
1. Kital Ly Livel 12 7 FALL	- Hydrophytic
2	Vegetation
Total Cover	Present? Yes No
% Bare Ground in Herb Stratum Remarks:	

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region _ Sampling Date: _ City/County: _ Applicant/Owner: Sampling Point: Investigator(s): _ M Section, Township, Range: Local relief (concave, convex, none): +6+ Landform (hillslope, terrace, etc.): Mhen 40,9447 99 Long: - 124, 103648 Datum: MA Subregion (LRR): _ Soil Map Unit Name: NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes / (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? No within a Wetland? Wetland Hydrology Present? Remarks: VEGETATION - Use scientific names of plants. Absolute Dominant Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: % Cover Species? Status **Number of Dominant Species** 11165 That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: (B) Percent of Dominant Species = Total Cover That Are OBL, FACW, or FAC: (A/B) Sapling/Shrub Stratum (Plot size: Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species **FACW** species FAC species **FACU** species = Total Cover \$ UPL species Herb Stratum (Plot size: Column Totals: a Prevalence Index = B/A = Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% FL 3 - Prevalence Index is ≤3.01 Fc 4 - Morphological Adaptations' (Provide supporting AC data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants1 Problematic Hydrophytic Vegetation¹ (Explain) 10. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. = Total Cover Woody Vine Stratum (Plot size: KLUDLE LISI Hydrophytic Vegetation Present? = Total Cover % Bare Ground in Herb Stratum Remarks:

0	\sim	84
300		D1 .

Sampling Point: 18-V

Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type	Loc ² Text	ure Remarks
1-6 107K3/3		Grabit	x loca - 111
			<u> </u>
Type: C=Concentration, D=Depletion,	, RM=Reduced Matrix, CS=Covered or Coat	ed Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
	o all LRRs, unless otherwise noted.)		dicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	-	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (excep	MI DA 1	Very Shallow Dark Surface (TF12)
		T MLRA I)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	1	Other (Explain in Remarks)
Depleted Below Dark Surface (A17)		3.	adjustees of budge-budge constation and
Thick Dark Surface (A12)	Redox Dark Surface (F6)	-11	ndicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if present):			
Type:			
		11.00	ic Soil Present? Yes No
Gravel	Fill.	Hydr	
YDROLOGY	Fill.	Hydr	
YDROLOGY Wetland Hydrology Indicators:	Fill.	Hydr	
Remarks	quired; check all that apply)	Hydr	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators:	quired; check all that apply) Water-Stained Leaves (B9) (continued to the continued to		Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one re-	Water-Stained Leaves (B9) (
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one ref	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)		Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognized Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sutfide Odor (C1)	except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one recognition of the primary Indicators (Minimum of the primary Indicators (Minimu	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	except Living Roots (C3)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one ref Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C	except J Living Roots (C3) (4)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one ref Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille	except J Living Roots (C3) (4) ed Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E)	except J Living Roots (C3) (4) ed Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E	except J Living Roots (C3) (4) ed Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E	except J Living Roots (C3) (4) ed Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E	except J Living Roots (C3) (4) ed Soils (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficield Observations:	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (C) ry (B7) Other (Explain in Remarks) ace (B8)	except J Living Roots (C3) 14) ed Soils (C6) O1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficield Observations: Surface Water Present? Yes	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (Explain in Remarks) ace (B8) Depth (inches):	except J Living Roots (C3) 14) ed Soils (C6) O1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficield Observations: Surface Water Present? Yes Water Table Present?	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (I) Ty (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	except J Living Roots (C3) 4) ed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
POROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present?	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E) Ty (B7) Other (Explain in Remarks) No Depth (inches):	except J Living Roots (C3) 4) ed Soils (C6) D1) (LRR A)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Ves	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (I) Ty (B7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	except J Living Roots (C3) (4) ed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surficient Observations: Surface Water Present? Ves	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E) Ty (B7) Other (Explain in Remarks) Ace (B8) Depth (inches): No Depth (inches):	except J Living Roots (C3) (4) ed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Process Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surface Water Present? Ves Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes capillary fringe)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E) Ty (B7) Other (Explain in Remarks) Ace (B8) Depth (inches): No Depth (inches):	except J Living Roots (C3) (4) ed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one reference) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Image Sparsely Vegetated Concave Surfaceld Observations: Surface Water Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Tille Stunted or Stressed Plants (E) Ty (B7) Other (Explain in Remarks) Ace (B8) Depth (inches): No Depth (inches):	except J Living Roots (C3) (4) ed Soils (C6) D1) (LRR A) Wetland Hyd	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

WETLAND DETERMINATION I	DATA FORM	 Western Mou 	intains, Valleys, and Coast Region
Michael II. Colicely	0.0	. Make	Megalle / HUM Sampling Date: 5/30/200
Project/Site: 10 4 WWW. 114 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Cit	y/County: 1100	Sampling Date: System
Applicant/Owner: Canty of Hubild+			State: CA Sampling Point: / NG-U
nvestigator(s): W [+		ction, Township, Ra	ange
			convex, none): 90 th Slave Slope (%)5 T
Subregion (LRR):	Lat: <u>40</u>	943779	Long: 474.104443 Datum: 3-5
Soil Map Unit Name:			NWI classification
are climatic / hydrologic conditions on the site typical for	this time of year?	Yes No_	(If no, explain in Remarks.)
are Vegetation, Soil, or Hydrology	_significantly dis	turbed? Are	"Normal Circumstances" present? Yes No No
are Vegetation, Soil, or Hydrology	_ naturally proble	ematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site ma	n chowing c	ampling point (locations, transects, important features, etc
		ampling point i	locations, transects, important leatures, etc
Hydrophytic Vegetation Present? Yes		Is the Sample	d Area
Hydric Soil Present? Yes Wetland Hydrology Present? Yes		within a Wetla	V
Wetland Hydrology Present? Yes	NO	1.45040000000000000000000000000000000000	
	1.2		1 1
Veg only. No st	irod and	Holay of lex	1000
/EGETATION - Use scientific names of pl			
	Absolute D	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover S	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant / ,
3			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	=	Total Cover	That Are OBL, FACW, or FAC: (A/B)
1.			Prevalence Index worksheet:
2			
3			OBL species
4			FACW species
5			FACU species 68 x4 = 777.
Herb Stratum (Plot size: 6-5)	=	Total Cover	UPL species x5 = 100
1. Rayhola) Tatara	20	YES UPL	Column Totals: IG (A) 462 (B)
2. Konny les mans	70	YES FAL.	
3. Anthorophi adedata	25	SOS FACU	Prevalence Index = B/A = 388 Hydrophytic Vegetation Indicators:
4. Deutilis almost	1-5	FACY	1 - Rapid Test for Hydrophytic Vegetation
5. Van nowation	5	FAC.	2 - Dominance Test is >50% Ta-1
6. Kung cerapus	3	FAL	_ 3 - Prevalence Index is ≤3.0 1 Fa
7. Levobor hering radization	3	FAC	4 - Morphological Adaptations' (Provide supporting
8. Idebrille official	3	FALL	data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants1
10.			Problematic Hydrophytic Vegetation¹ (Explain)
			Indicators of hydric soil and wetland hydrology must
11.		11200	be present, unless disturbed or problematic.
11.	94 =	Total Cover	7-
11	<u>94</u> =	Total Cover 40% - 4	
11.	<u>94</u> =	Total Cover 3/6-4	Hydrophytic
11	24	Y FACL	
11	24	Total Cover 20%-19 FACL Total Cover	Hydrophytic Vegetation

roject/Site: Mc Cn/ey,ll	Col/ (et	City	//County: HU	M	_ Sampling Date: 5/3D/
pplicant/Owner: Cant at	Hurbilde			State: CA	_ Sampling Point: 120:VI
vestigator(s): MH, CH		Se	ction, Township, Ra	nge:	
andform (hillslope, terrace, etc.): <u>//</u> /	name 4000	LO LO	cal relie (concave,	convex, none): 1/5	1.1.1.1 Slope (%): 0-
ubregion (LRR):		Lat: 4 0.	949108	Long: -124/ /	5953 Datum: NA88
oil Map Unit Name:				NWI class	ification:
e climatic / hydrologic conditions on	the site typical for	this time of year?	Yes No_	(If no, explain in	Remarks.)
re Vegetation, Soil, o	r Hydrology	_ significantly dis	turbed? Are "	Normal Circumstances	" present? Yes No
e Vegetation, Soil, o	r Hydrology	_ naturally proble	matic? (If ne	eded, explain any ans	wers in Remarks.)
UMMARY OF FINDINGS - A	Attach site ma	n showing s	ampling point l	nestions transpo	ts important features etc
			I Point i	ocations, transec	is, important reatures, etc
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes		Is the Sampled	Area	
Wetland Hydrology Present?	Yes		within a Wetlar	id? Yes _	No_X
Remarks:			1		
EGETATION – Use scientifi	c names of pl	ants.			
10			ominant Indicator	Dominance Test wo	orksheet:
ree Stratum (Plot size:	7).	% Cover S	pecies? Status	Number of Dominant	
Micis sitchi	-117	15-	Y FAC	That Are OBL, FACV	V, or FAC: (A)
Alnus rubia		17	/ I-AI	Total Number of Dor	
, <u>B</u> <u>B</u> <u>B</u> <u>B</u>				Species Across All S	trata: (B)
	N	00	Total Cover	Percent of Dominant	Species 75 /
Sapling/Shrub Stratum (Plot size: _	200		Total Cover	That Are OBL, FACV	
				Prevalence Index w Total % Cover o	
2.					$ \begin{array}{ccc} \text{Multiply by:} \\ \text{X 1 = } & G \end{array} $
				FACW species	O x2= 0
				The state of the s	77 x3= 531
				FACU species	70 x4= 80
Herb Stratum (Plot size:)	70	Total Cover	UPL species	0 x5= 6
	D158	16	Y FAC	Column Totals:	97 (A) 611 (B)
HOICE 1829	1	4	N FAC	Prevalence Ind	ex = B/A = 3.10
A HYMILL FIT	14-40-14		N FAI	Hydrophytic Vegeta	
	catum		N FACU	1 Rapid Test fo	r Hydrophytic Vegetation
i. Holcus Ionatus			N FAC	√2 - Dominance 1	00000
				3 - Prevalence I	
-				4 - Morphologica	al Adaptations ¹ (Provide supporting orks or on a separate sheet)
					-Vascular Plants ¹
) 0.					rophytic Vegetation (Explain)
1.				The state of the s	soil and wetland hydrology must
12	× 16	91 =	Fotal Cover		sturbed or problematic.
Noody Vine Stratum (Plot size:) 1/2	10	Y PAU		
1. KUBIS USSISUS		10	1 1100	Hydrophytic	/
2.				Vegetation Present?	Yes No
		1 17	Polat October		140
% Bare Ground in Herb Stratum			Total Cover		

rofile Description: (Describe to	the depth needed to document the indicator or co	infirm the absence	of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist)	% Color (moist) % Type Lo	c ² Texture	Remarks
0-14 107/24/1	100	SILLIA	HPGGY Engly
14-25 104,83/2	160	Ledis	
			· · · · · · · · · · · · · · · · · · ·
		= 1	
	- Bu B 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	20	
	ion, RM=Reduced Matrix, CS=Covered or Coated Sai le to all LRRs, unless otherwise noted.)		ation: PL=Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)		Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLF		Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		er (Explain in Remarks)
Depleted Below Dark Surface (3	
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Indicato	rs of hydrophytic vegetation and
_ Sandy Mucky Mineral (\$1)	Depleted Dark Surface (F7)	wetlar	nd hydrology must be present,
_ Sandy Gleyed Matrix (\$4)	Redox Depressions (F8)	unles	s disturbed or problematic.
Restrictive Layer (if present):			
Restrictive Layer (if present): Type:			
	hon rich	Hydric Soil	Present? Yes No <u> </u>
Type:	hon rich	Hydric Soil	Present? Yes No <u></u>
Type:	hon rich	Hydric Soil	Present? Yes No <u>×</u>
Type:			
Type	required; check all that apply)	Secon	Present? Yes No
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep	Secon	dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2
Type:	required; check all that apply)	Secon	dary Indicators (2 or more required)
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secon	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
Type	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secon t W	dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Type	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secon t W Di Di Si	dary Indicators (2 or more required) fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C
Type	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Secon t W Di Si g Roots (C3) G	dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ce
Type	required; check all that apply) Water-Stained Leaves (B9) (excep	Secon t W Di Si Si g Roots (C3) G Si	dary Indicators (2 or more required) Fater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Fainage Patterns (B10) Faina
Type	required; check all that apply) Water-Stained Leaves (B9) (excep	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (nallow Aquitard (D3)) (AC-Neutral Test (D5)
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D3) (aturation Visible on Aerial Imagery (D3) (aturation Vis
Type	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Living agery (B7) Other (Explain in Remarks)	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (nallow Aquitard (D3)) (AC-Neutral Test (D5)
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Living agery (B7) Other (Explain in Remarks)	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D3) (aturation Visible on Aerial Imagery (D3) (aturation Vis
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Living Capty (B7) Other (Explain in Remarks)	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D3) (aturation Visible on Aerial Imagery (D3) (aturation Vis
Type	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Living Capty (B7) Other (Explain in Remarks) No Depth (inches):	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D3) (aturation Visible on Aerial Imagery (D3) (aturation Vis
Type:	required; check all that apply) Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil Stunted or Stressed Plants (D1) (Living Capty (B7) Other (Explain in Remarks)	Secont	dary Indicators (2 or more required) (ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) (rainage Patterns (B10) (ry-Season Water Table (C2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D2) (aturation Visible on Aerial Imagery (Caeomorphic Position (D3) (aturation Visible on Aerial Imagery (D3) (aturation Vis

WETLAND DETERMINA	ATION DATA FORM -	Western Mou	ntains, Valleys, and Coast Region
Project/Site: Malandul, Coly C	ad and	County: 4	M Sampling Date: 5/31/202
Tojourono.	religions only	20unty	State: CA Sampling Point: 1/12/7w
14/11/11/1			
			nge:
			convex, none): grill slape Slope (%): 5-8
Subregion (LRR):	Lat <u>409</u> 4	14093	Long: - 124,106565 Datum: NA 85
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site ty	ypical for this time of year? '	res Ko No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrolo	gy significantly distu	rbed? Are "	Normal Circumstances" present? Yes Kongarian No
Are Vegetation, Soil, or Hydrolo	gy naturally problem	atic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach	site man showing sar	noling point l	ocations, transects, important features, etc.
	0	inputing points	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No X	Is the Sampled	Area
	No X	within a Wetlar	nd? Yes Par No
Remarks:			
1415-	Ipai welland		
00)	ight wolland		
VEGETATION - Use scientific name	es of plants.		
Tree Stratum (Plot size:		minant Indicator	Dominance Test worksheet:
	% Cover Spe	ecies? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Species Across All Strata: (B)
4			Species Across All Strata: (B)
	/ = T	otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 750/(A/B)
Sapling/Shrub Stratum (Plot size:			Prevalence Index worksheet:
1. Shlix hodarmh	——————————————————————————————————————	os FACLY	Total % Cover of: Multiply by:
2			OBL species
3			FACW species 28 x 2 = 56
4.			FAC species
5			FACU species 20 x4= 80
Herb Stratum (Plot size:		otal Cover	UPL species
1. JUMCUS WETHERS	8	FACLU	Column Totals: 120 (A) 352 (B)
2. Innimalus Comas	35	es FAC	Prevalence Index = B/A = 2.93
3. Trisolu reans		FAC	Hydrophytic Vegetation Indicators:
4. Holis Krath	20 4	105 FAL	1 - Rapid Test for Hydrophytic Vegetation
5. Anthrohun adarati-	15 '	AACU	₹ 2 - Dominance Test is >50%
6. Pha prhings	12	FAC	3 - Prevalence Index is ≤3.0¹
7. Rholy (513043	3	FACH	4 - Morphological Adaptations¹ (Provide supporting
8. Thrus butoning		FAIW	data in Remarks or on a separate sheet)
9. HOSALKA ATACILI		FAIL	5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11		"tret	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:		otal Cover 284:22	L. and an analysis and brancomerine
1. R (4 0/25 1 4 5 5 1 4 5	5 ×	13 FACH	Hydrophytic
2.		1 131	Vegetation
All and a second and a second	5 = Tc	otal Cover	Present? Yes No
% Bare Ground in Herb Stratum0		0.02.932	
Remarks:			estant TAC Destal
2) PRSS P.			OSTANT THE SENT
71 100			

Sampling Point Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth Color (mgist) (inches) Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: __ Sandy Redox (S5) Histosol (A1) 2 cm Muck (A10) Histic Epipedon (A2) Red Parent Material (TF2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) ___ Hydrogen Sulfide (A4) ___ Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, Sandy Mucky Mineral (S1) unless disturbed or problematic Redox Depressions (F8) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required, check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) Salt Crust (B11) Drainage Patterns (B10) Saturation (A3) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) ___ Oxidized Rhizospheres along Living Roots (C3) ___ Geomorphic Position (D2) Drift Deposits (B3) __ Shallow Aquitard (D3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) __ FAC-Neutral Test (D5) Fg. 1 Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) __ Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Y Depth (inches): Yes No Depth (inches): Water Table Present? Yes ____ No _X Depth (inches): ____ Wetland Hydrology Present? Yes ____ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks

1 / 1 11		Intains, Valleys, and Coast Region
	City/County: H	
Applicant/Owner: any of they LA		State: CA Sampling Point: ZZ-W
nvestigator(s):	Section, Township, Ra	
andform (hillslope, terrace, etc.): North UCG.	Local relief (concave,	convex, none): 56/12 Slope (%): 3-5
Subregion (LRR):	Lat: 40.943969	Long: 124,106757 Datum: NASK
Soil Map Unit Name:		NWI classification:
are climatic / hydrologic conditions on the site typical for	this time of year? Yes X No_	(If no, explain in Remarks.)
are Vegetation, Soil, or Hydrology		"Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology		eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes	No Is the Sampled within a Wetla	1.0.7
Remarks: US- year wother. WS- Mg Plat anly	- No Surface level	indiraters of hydrology
/EGETATION – Use scientific names of p	lants.	
Tree Stratum (Plot size: (230)	Absolute Dominant Indicator Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2.		
3		Total Number of Dominant Species Across All Strata: (B)
4		Percent of Dominant Species 750
Sapling/Shrub Stratum (Plot size: (-15)	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1. Saly hoppina	5 y FACU	Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		OBL species 0 x1= 0
4.		FACW species $28. \times 2 = 56$ FAC species $46. \times 3 = 138$
5.		1710 000000
A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	= Total Cover	FACU species x 4 =
1. Potent la MS. inc	8 081	Column Totals: 164 (A) 29((B)
2011		5.50
	10 FACU	Prevalence Index = B/A =
4. Kermente gous	25 VIS FAL	Hydrophytic Vegetation Indicators:
5. Hrsakin arachis	8 FACL	1 - Rapid Test for Hydrophytic Vegetation × 2 - Dominance Test is >50%
6. Antorough e braken	20 VPS FACE	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7. Williams languas	15 YPS FAC	4 - Morphological Adaptations ¹ (Provide supporting
8. 1 C: Folke on las	5 FAC	data in Remarks or on a separate sheet)
9. Plantaco lancedota	1 FAC	5 - Wetland Non-Vascular Plants1
10. Hypothery radicale	1 FAU	Problematic Hydrophytic Vegetation¹ (Explain)
11. Jihun Lohal	UPL	¹ Indicators of hydric soil and wetland hydrology must
Manda Vine Stratum (Plot sive)	99 = Total Cover 375-46	A be present, unless distribed or problematic.
Woody Vine Stratum (Plot size:) 1.		Name of the Control o
2.		Hydrophytic Vegetation
2.	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum		
Remarks:		

			ntains, Valleys, and Coast Region Manual House Sampling Date: 5/3//2023
Applicant/Owner: Conf. of Market A			State: CA Sampling Point: 123 UL
1111		Section, Township, Ra	
Landform (hillslope, terrace, etc.): Auras 4504			
Subregion (LRR):	1at 40	,443545	Long:124,106330 Datum: VASS
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for this	s time of ver	Secretary to the second second	
Are Vegetation, Soil, or Hydrology s			Normal Circumstances" present? Yes No
are Vegetation, Soil, or Hydrology n			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map			
Hydrophytic Vegetation Present? Yes N	× ×	Is the Sampled	
Remarks:		of hydrologic	1.
VEGETATION – Use scientific names of plan			
Tree Stratum (Plot size:) 1.	Absolute % Cover	Dominant Indicator Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2.			Total Number of Dominant
3			Species Across All Strata (B)
4	-		Percent of Dominant Species 27%
Sapling/Shrub Stratum (Plot size:		= Total Cover	That Are OBL, FACW, or FAC: (A/B)
1,			Prevalence Index worksheet:
2			
3.			FACW species O x 2 = O
4.			FAC species YC x3 = 178
5		- Tatal Causa	FACU species 68 x4 = 232
Herb Stratum (Plot size:)	1000	= Total Cover	UPL species O x 5 = O
1. And wanthe adorate	45	Yes FACH	Column Totals: 10% (A) 370 (B)
2. Hipolanis chtrade	- 5	FAIL	Prevalence Index = B/A = 3-52
3. Letus ulgenosus	3	FAC	Hydrophytic Vegetation Indicators:
4. Hally - Parates	35	WI FA	1 - Rapid Test for Hydrophytic Vegetation
5. homelis pus		FAC	2 - Dominance Test is >50% A
6. Fraint 1/2 augus		- OBL FAC	3 - Prevalence Index is ≤3.0¹ (Ex)
7. Planteja larrenleta			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.	-		5 - Wetland Non-Vascular Plants¹
10.			Problematic Hydrophytic Vegetation ¹ (Explain)
11.	97	- Total C - 5) 6-46-5	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		= Total Cover 7, 6-46.5	
1. Kubh = uginus	8	MS FALL	Hydrophytic
2			Vegetation
% Bare Ground in Herb Stratum	_&	= Total Cover	Present? Yes No
Remarks			

		ountains, Valleys, and Coast Region
Project/Site: Milafarulla City Contr	City/County:	M Sampling Date: 5/31/262
Applicant/Owner: Carely of flugslile		State: CA Sampling Point: 124-w
nvestigator(s):	Section, Township,	
		e, convex, none): Slope (%):
A 1		Long: -124,106592 Datum: NASS
Soil Map Unit Name:	200	NWI classification:
Are climatic / hydrologic conditions on the site typical fo	or this time of year? Yes X	
Are Vegetation, Soil, or Hydrology		re "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site m	ap showing sampling poin	t locations, transects, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Yes	No Is the Samp within a Wel	ne -
	oo soutan level introt	of hydrology.
VEGETATION – Use scientific names of p		
Tree Stratum (Plot size:)	Absolute Dominant Indicate % Cover Species? Status	
1		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3.		Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:	= Total Cover	That Are OBL, FACW, or FAC:
1.		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		OBL species O x1 = O
4		FACW species $\frac{48}{21}$ x 2 = $\frac{96}{63}$
5		73
Herb Stratum (Plot size	= Total Cover	FACU species
1. And to law added to	20 YPS FREM	
2. Hollan lastes	20 (105 FAL	
3. Junior hisomius	8 FACE	Prevalence Index = B/A = 2.72
4. Hoseiler 5(hells	8 FAW	
5. Runez an Foselle	FAC	2 - Dominance Test is >50%
6. Hyporherus padente	3 FAC	X 3 - Prevalence Index is \$3.01 = 2.7>
7. Vinus ensifolius	FATO	4 - Morphological Adaptations (Provide supporting
8. Sispination Calling	12 yel FACL	data in Remarks or on a separate sheet)
9. Sinnus brifansi	12 109 PAL	5 - Wetland Non-Vascular Plants
10.		Problematic Hydrophytic Vegetation¹ (Explain)
11	- 0-	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Woody Vine Stratum (Plot size:)	92 = Total Cover 50 =	
1.		_ Hydrophytic
2.		Vegetation
% Bare Ground in Herb Stratum	= Total Cover	Present? Yes No No
78 Dare Ground III Freib Ottatelli		
Remarks.	st tp.1. ps. Pass Fac	- Untral

VEILAND DEIER	-11.	11	1 111	1 ,
Project/Site: MIChly/4 (Applicant/Owner: County of	the Coll	City/County:	MM	Sampling Date: 5/31/200
Applicant/Owner: County of	Han bold		State: CA	Sampling Point: 4/1254
nvestigator(s):		_ Section, Township, Rai		
andform (hillslope, terrace, etc.): Ark	in tecres	Local relief (concave,	convex, none): 56u	Slope (%): 5-7
Subregion (LRR):	Lat: <u></u>	0.943340	Long: -124,10580	9 Datum: VAD86
Soil Map Unit Name:			NWI classific	
Are climatic / hydrologic conditions on the	e site typical for this time of y	/ear? Yes No	(If no, explain in F	Remarks.)
Are Vegetation, Soil, or F				present? Yes No
Are Vegetation, Soil, or F			eeded, explain any answe	
SUMMARY OF FINDINGS - At			ocations, transects	s, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No	Is the Sampled within a Wetlar	I Area nd? Yes	No
Remarks:	4 - No garten	level intral	iors at hydrolo	yy.
/EGETATION - Use scientific	1			
10	Absolut	e Dominant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:		r Species? Status	Number of Dominant S	
1			That Are OBL, FACW,	or FAC: (A)
3			Total Number of Domin	
4.			Species Across All Stra	
	2000	= Total Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:			Prevalence Index wor	V.1-7
1			Total % Cover of:	
2			A.	x1= C
3			FACW species	x2= 0
4			FAC species	x3= 170
5.		= Total Cover	FACU species	1 x4= 2(00
Herb Stratum (Plot size: 1=5		2	UPL species	
1. Another on the adoctor	40	JUS ALY	Column Totals: 113	
2. Holar, lahr		- SMS FAI	Prevalence Index	x = B/A = 3.57
3. Lottes uliginosus	10	FAC	Hydrophytic Vegetati	on Indicators:
4. Hay pollmore shade	± 5	FACU		Hydrophytic Vegetation
5. Vilatyo Carlotte		FAC	2 - Dominance Tes	
6. homend = man			3 - Prevalence Ind	
7 8.			4 - Morphological A	Adaptations (Provide supporting s or on a separate sheet)
9.			5 - Wetland Non-V	
10.			A STATE OF THE PARTY OF THE PAR	ophytic Vegetation ¹ (Explain)
11	C.F.	= Total Cover 65:47:		il and wetland hydrology must
Woody Vine Stratum (Plot size:	(5) - 19	_= Total Cover Zv= L		
1. Reduir brising	CS	19 FACY	Hydrophytic	
2.			Vegetation	
By Base Count in Unit Status	10	= Total Cover	Present? Ye	s No
% Bare Ground in Herb Stratum Remarks:	. 3			100

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region Project/Site: Mck./u.l. Cil, Col City/County: Mile 4, // Sampling Date: 131 7023 Applicant/Owner: Canty of White It Investigator(s): Section, Township, Range Landform (hillstope, terrace, etc.): MCA UTGA Local relief (concave, convex, none): 5 MA Slope (%): 5 MA Subregion (LRR): Lat. 40.947849 Long: -174.104.548 NWI classification: ___ Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____ Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? Yes within a Wetland? Wetland Hydrology Present? only - No sarther level introtes of hydrolous VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: (30) % Cover Species? Status Number of Dominant Species 1. Salut andans Y FALLY That Are OBL, FACW, or FAC: Total Number of Dominant (B) Species Across All Strata: Percent of Dominant Species = Total Cover (A/B) That Are OBL, FACW, or FAC. Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species **FACW** species FAC species FACU species = Total Cover Herb Stratum (Plot size: UPL species Column Totals: Prevalence Index = B/A = Z. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation × 2 - Dominance Test is >50% = 50% × 3 - Prevalence Index is ≤3.01 =7.7 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) __ 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must 38 = Total Cover 70 - 76 be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: (-15) Hydrophytic Vegetation Phyline atheritalis FAL _= Total Cover 50= 10 Present? 20011 % Bare Ground in Herb Stratum _ Remarks:

				ntains, Valleys, and Coast Region
Project/Site: M/Cinky (14) Chil		ity/County:	Mek	1-1 4 14 /HU4 Sampling Date: 5/31/2023
Applicant/Owner: Carty of Harrolt		100000		State: CA Sampling Point: 127 - W
Investigator(s): Mus Justit		Section, Tow	nship, Ran	nge. 56,060,01E
Landform (hillslope, terrace, etc.): Ner. L.				
				Long: -124,162562 Datum: #AD88
Soil Map Unit Name:				NWI classification: PUBKX
Are climatic / hydrologic conditions on the site typical for t	his time of yea	r? Yes	∠ No	
Are Vegetation, Soil, or Hydrology				Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology				eded, explain any answers in Remarks.)
	The same and the s	sampling) point ic	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes Y	No No		Sampled n a Wetlan	
Remarks: WIJ 3-Parwilland Excavated Stormum		entra	Dona	
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant Species Across All Strata (B)
4.		= Total Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1			-	Total % Cover of Multiply by.
3				OBL species x 1 =
4				FACW species x 2 =
5.				FACUL species 0 x3 = 36
		= Total Cov	er	TAOU species X4
1. Herden brank a flucture	55	1	FACL	UPL species $0 \times 5 = 0$ Column Totals: $0 \times 5 = 0$ (B)
1. Herden branky as huran 2. Kenterwill Mans	10	7	FAL	(-)
3. Charly CC 1843	- 1		FALL	Prevalence Index = B/A = Z.16 Hydrophytic Vegetation Indicators:
4.			11.00	1 - Rapid Test for Hydrophytic Vegetation
5.				2 - Dominance Test is >50%
6.				∑3 - Prevalence Index is ≤3.01 = 7.11.
7				4 - Morphological Adaptations (Provide supporting
8				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10			_	Problematic Hydrophytic Vegetation¹ (Explain)
11.		= Total Cov	-561/-705	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size)		- Total Cov	CO" 17.	4
1				Hydrophytic
2				Vegetation
% Bare Ground in Herb Stratum 39		= Total Cov	er	Present? Yes No
Remarks:				

-	-	
2	U	L

Sampling Point: 127-Le

Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type Loc²	Texture Remarks
6-4 10 Ur 3/2 98	5-15/8 7 C M	3-100
4-12 7.54 614 85	16-118 15 G M	5.5
20 4619 01	- W-176/10	
Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Applicable to		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	역원 전 :
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix (F3) X Redox Dark Surface (F6)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		*
Depth (inches):		Hydric Soil Present? Yes No
YDROLOGY		
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requ		Secondary Indicators (2 or more required)
Netland Hydrology Indicators: Primary Indicators (minimum of one requ Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1,
Vetland Hydrology Indicators: Primary Indicators (minimum of one requi Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requestions Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (
Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Roots (C3)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one requications) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ☑ FAC-Neutral Test (D5)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requication (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ☑ FAC-Neutral Test (D5)
Vetland Hydrology Indicators: Primary Indicators (minimum of one regulation Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ▼ FAC-Neutral Test (D5) → RA) □ Raised Ant Mounds (D6) (LRR A)
Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement Indicators (Minimum of one requirement Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI (B7) Other (Explain in Remarks)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ▼ FAC-Neutral Test (D5) → RA) □ Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requirement Indicators	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B7) Depth (inches)	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ▼ FAC-Neutral Test (D5) → RA) □ Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requirement Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Nater Table Present?	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI (B7) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ▼ FAC-Neutral Test (D5) □ 5 R A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one requirement (Minimum of one req	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI (B7) Other (Explain in Remarks) (B8) No Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ▼ FAC-Neutral Test (D5) → RA) □ Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of one requirement Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Nater Table Present? Yes Saturation Present? Yes Includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI (B7) Other (Explain in Remarks) (B8) Depth (inches): Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) ☐ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ※ FAC-Neutral Test (D5) ☐ 55 (R A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one requirement Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Nater Table Present? Yes Saturation Present? Yes Includes capillary fringe)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B7) Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) ☐ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ※ FAC-Neutral Test (D5) ☐ 55 (R A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one requirement Indicators) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Ves Nater Table Present? Yes Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge,	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B7) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): Momonitoring well, aerial photos, previous inspection	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) ☐ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ※ FAC-Neutral Test (D5) ☐ 55 (R A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Vetland Hydrology Indicators: Vrimary Indicators (minimum of one requirement Indicators (Minimum of one requirement Indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surfact (Beld Observations: Surface Water Present? Yes Vater Table Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, Remarks:	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRI Other (Explain in Remarks) (B7) Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Roots (C3) ☐ Geomorphic Position (D2) □ Shallow Aquitard (D3) (C6) ※ FAC-Neutral Test (D5) ☐ 55 (R A) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)

WETLAND DETERMINATION	DATA FORM - V	Nestern Mou	ntains, Valleys, and Coast Region
Project/Site: Mcknhyenly Cly Cely	City/C	ounty: H	My Sampling Date: 5/3/1202
Applicant/Owner: Carly of Habilal		22	State: CA Sampling Point: 125-40
Investigator(s): M H			nge 56,06W,01E
	Local	relief (concave,	convex, none): CANULY Slope (%): (-5
			Long -124,107,504 Datum: NAD 85
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for	this time of year? Y	_	
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ap showing sam	pling point l	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X		
Hydric Soil Present? Yes		Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes	No X	Within a vector	103
Remarks:			
POPTATION II CO	Carva e		
VEGETATION – Use scientific names of p	CAN.	Savet to Peaks	I Bar Land Tark and the A
Tree Stratum (Plot size:)	Absolute Dom <u>% Cover</u> —Spe	ninant Indicator cies? Status	Dominance Test worksheet: Number of Dominant Species
1			That Are OBL, FACW, or FAC:(A)
2.			Total Number of Dominant
3			Species Across All Strata: (B)
4.			Percent of Dominant Species
2010-101-1-1-101-1-1-101-1-101-1-1-101-1-1-101-	= To	tal Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1			Total % Cover of: Multiply by:
3.			OBL species x1 = 6
4.			FACW species O x 2 = C
5.			FAC species (8 x3 = 204
	= To	tal Cover	FACU species
Herb Stratum (Plot size:	26	1	UPL species $7 \times 5 = 35$ Column Totals: $17 \times 6 \times 387$ (B)
1. Androyanthen educin	$-\frac{U}{3}$	127 HKU	
2. Histura arund vaccon	$\frac{20}{10}$	193 FAC	Prevalence Index = B/A = 346
3. Dauly slove sorts .	37	13 FACE	Hydrophytic Vegetation Indicators:
5. Vicin Jakana	- 1/2 4	UPL	1 - Rapid Test for Hydrophytic Vegetation
6. Plantique la replata	3	FAC	× 2 - Dominance Test is >50% R 53 3 - Prevalence Index is ≤3.01 = 3, 46 - Fa. 1
7. Fratuca designio	5	FAL	4 - Morphological Adaptations¹ (Provide supporting
8. Colour & verten	7	Tupe	data in Remarks or on a separate sheet)
9. Leuranthum valent	7	FALL	5 - Wetland Non-Vascular Plants1
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
Licensia de la companya de la compan	= Tot	al Cover 1 165	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		706-27	
1,			Hydrophytic Vegetation
			regendent
2		al Cover	Present? Yes No
% Bare Ground in Herb Stratum	= Tot	al Cover	Present? Yes No

Depth Matri	ibe to the dept	h needed to document the indicator or cor	nfirm the absence of indicators.)
Dentil Mail		Redox Features	
(inches) Color (moist		Color (moist) % Type Loc	Zexture Remarks
0-8 12ry	13 100		and the Fill copy
10 ·			- ty ifwel
		Reduced Matrix, CS=Covered or Coated San	d Grains. ² Location: PL=Pore Lining, M=Matrix.
iydric Soil Indicators: (Ap	plicable to all I	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solis ¹ :
_ Histosol (A1)		Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)		Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except MLR	
_ Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Su	rface (A11)	Depleted Matrix (F3)	A THE RESERVE AND A SECOND SEC
Thick Dark Surface (A12	And the second second	Redox Dark Surface (F6)	3Indicators of hydrophytic vegetation and
_ Sandy Mucky Mineral (S		Depleted Dark Surface (F7)	wetland hydrology must be present.
_ Sandy Gleyed Matrix (S4		Redox Depressions (F8)	unless disturbed or problematic.
estrictive Layer (if presen	it):		
Type:			THE PARTY OF THE P
Depth (inches):			Hydric Soil Present? Yes No X
	-likely!	. I difficult to dig d	4.00
YDROLOGY			
Vetland Hydrology Indicate			
Primary Indicators (minimum	of one required	; check all that apply)	Secondary Indicators (2 or more required)
Curtons Material (A1)		Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)			
Sunace water (A1) High Water Table (A2)		MLRA 1, 2, 4A, and 4B)	4A, and 4B)
		MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	1
High Water Table (A2)			4A, and 4B)
High Water Table (A2) Saturation (A3) Water Marks (B1)		Salt Crust (B11)	4A, and 4B) Drainage Patterns (B10)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		 Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living 	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Roots (C3) Geomorphic Position (D2)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	AA, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)		Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	AA, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6))	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae) rial Imagery (B7	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF	AA, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con) rial Imagery (B7	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Confield Observations:) rial Imagery (B7 ncave Surface (B	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR //) Other (Explain in Remarks)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Confield Observations: Surface Water Present?) rial Imagery (B7 ncave Surface (I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks) 88) No Depth (inches)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Teld Observations: Surface Water Present? Water Table Present?) erial Imagery (B7 ncave Surface (B7 Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) No Depth (inches) Depth (inches)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Field Observations: Surface Water Present? Vater Table Present? Saturation Present? includes capillary fringe)) erial Imagery (Br ncave Surface (B Yes I Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) Solution (Stressed Plants (D1) (LF Other (Explain in Remarks) Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Field Observations: Surface Water Present? Vater Table Present? Saturation Present? includes capillary fringe)) erial Imagery (Br ncave Surface (B Yes I Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) No Depth (inches) Depth (inches)	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Field Observations: Surface Water Present? Water Table Present? Saturation Present? Sincludes capillary fringe) Describe Recorded Data (street) erial Imagery (Br ncave Surface (B Yes I Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) Solution (Stressed Plants (D1) (LF Other (Explain in Remarks) Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Field Observations: Surface Water Present? Water Table Present? Saturation Present? Sincludes capillary fringe) Describe Recorded Data (street) erial Imagery (Br ncave Surface (B Yes I Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) Solution (Stressed Plants (D1) (LF Other (Explain in Remarks) Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Con Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)) erial Imagery (Br ncave Surface (B Yes I Yes I Yes I	Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks) Solution (Stressed Plants (D1) (LF Other (Explain in Remarks) Depth (inches):	4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) s (C6) FAC-Neutral Test (D5) RA) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes No

WETLAND DETERMINATION DA	TA FORM -	Western Mou	ntains, Valleys, and Coast Region	L
Project/Site: McGirly ll City Cerly	City/0	County:	(I/A Sampling Date. 5	/31/2023
Applicant/Owner: Carly of Historian			State: A Sampling Point	
			nge: 36 OGD CATE	42001-12
Landform (hillslope, terrace, etc.): Mary UTT				e (%): 0
			Long: _174.167.567 Datum	
Soil Map Unit Name:			NWI classification: PUBK	×
Are climatic / hydrologic conditions on the site typical for this	s time of year? \	Yes X No_	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology s			Normal Circumstances" present? Yes 🔀	No
Are Vegetation, Soil, or Hydrology r			eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sar	npling point lo	ocations, transects, important fea	tures, etc.
Hydric Soil Present? Wetland Hydrology Present? Yes N N	0	11.000	d? Yes No	
Sample point in e			for Stormaturunts.	
VEGETATION - Use scientific names of plan	ts.	1		
		minant Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover Spe	ecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2.				(^)
3.			Total Number of Dominant Species Across All Strata:	(B)
4.			Percent of Dominant Species — C	- CONT
Continue Charles (District	= To	otal Cover	That Are OBL, FACW, or FAC:	0 (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:	
2			Total % Cover of: Multiply	
3.			OBL species x1 =	
4.			FACW species $\frac{78}{22}$ x2 = $\frac{60}{22}$ FAC species $\frac{72}{22}$ x3 = $\frac{60}{22}$	-
5			FACU species 8 x4 = 1Z	
Herb Stratum (Plot size: C55)	= To	otal Cover	UPL species	
1. Horden brachycaplan	25 .	Y FACE	Column Totals: 58 (A) 13	4 (B)
2. Ashu orandy sun	8	× FAC	Prevalence Index = B/A = Z 3	1
3. Folice of Colo, 3	8	y FAC	Hydrophytic Vegetation Indicators:	
4. Hyparchery reditate	8	Y FACU	1 - Rapid Test for Hydrophytic Vegetat	tion
5. Knowly oth >	3 /	FA	2 - Dominance Test is >50%	
6. Player megalate	3 -	FAC	≥ 3 - Prevalence Index is ≤3.0¹ PASS	
7. Cypians any posts		FACL	 4 - Morphological Adaptations¹ (Provided data in Remarks or on a separate service) 	le supporting
9.			5 - Wetland Non-Vascular Plants ¹	
10.			Problematic Hydrophytic Vegetation ¹ (Explain)
11	F-ig -	tal Cove 28-79	¹ Indicators of hydric soil and wetland hydro be present, unless disturbed or problemation	logy must
Woody Vine Stratum (Plot size:)	= To	tal Cove To 6-10		
1			Hydrophytic	
2			Vegetation	
% Bare Ground in Herb Stratum <u>42</u>	= To	tal Cover	Present? Yes No	_
Remarks:		-	and the second	
			05) FEELS FAC LAUNTELTEST	

C	0	í	Ď.
J	v	Q	See .

Sampling Point: 129-1

Depth Matrix	Redox	Features				
(inches) Color (moist) %	Color (moist)		Type'	Loc²	Texture	Remarks
5-4 Gy-3/1 99	7.5-1-518	5	4	M	5-16 non	
4-10 7.5-15/4 86	7.5-115/18	M			4 Alfon	
ELIN	- 110/10	42				
DOM						
				-	_	-
				-		
Type: C=Concentration, D=Depletion,				Sand Gra		cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to)			ors for Problematic Hydric Soils ³ :
_ Histosol (A1)	Sandy Redox (S					n Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mi		except M	LKA 1)		y Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed M				Oth	er (Explain in Remarks)
Depleted Below Dark Surface (A11)	A THE RESERVE OF THE PARTY OF T				Janlinet	ors of hydrophytic vegetation and
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface Depleted Dark Street					ors or nydropnytic vegetation and and hydrology must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Redox Depression					ing nyarology must be present,
Restrictive Layer (if present):	Neudx Depressio	nis (FQ)			unies	as disturbed of problematic
Type:						are to a contract of
Depth (inches):					Hydric Soil	Present? Yes X No
- Ofcautu of - Very Co	eparted at a	1':				
- Cycautu o Very Co	eparted at a	1":				
YDROLOGY Netland Hydrology Indicators:						
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required)	uired; check all that apply)					ndary Indicators (2 or more required)
YDROLOGY Velly Conversely Conver	uired; check all that apply)	ed Leaves		ept		Vater-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	uired; check all that apply)			ept		AND REST OF MAKE HER CLASS OF STREET
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req _ Surface Water (A1)	uired; check all that apply)	ed Leaves (ept	v	Vater-Stained Leaves (B9) (MLRA 1, 2
YDROLOGY Velland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	uired; check all that apply Water-Stain MLRA 1	ed Leaves (, 2, 4A, and	148)	ept	_ v	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	uired; check all that apply) Water-Stain MLRA 1, Salt Crust (I	ed Leaves (, 2, 4A, and B11) ertebrates (1 4B) B13)	ept	_ v	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	uired; check all that apply) Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ed Leaves (, 2, 4A, and B11) ertebrates (foulfide Odor	B13)		v	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2)
YDROLOGY Very Cor YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply) Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ed Leaves , 2, 4A, and B11) ertebrates (Eulfide Odor nizospheres	1 4B) B13) (C1) along Liv		V C C ts (C3) S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	uired; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve	ed Leaves , 2, 4A, and B11) ertebrates (f sulfide Odor nizospheres f Reduced I	14B) B13) (C1) along Liv ron (C4)	ing Roo	V C S ts (C3) S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	uired: check all that apply Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leaves (, 2, 4A, and B11) ertebrates (f dulfide Odor nizospheres f Reduced II Reduction	B13) (C1) salong Liv ron (C4) in Tilled S	ring Road	- V - Es (C3) × C - S - S - S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	uired: check all that apply) Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ned Leaves (, 2, 4A, and B11) ertebrates (foulfide Odor nizospheres f Reduced II Reduction Stressed Pla	B13) (C1) salong Livron (C4) in Tilled Sants (D1)	ring Road	V C S ts (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one requirement of the control of the c	uired; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S y (B7) Water-Stain	ned Leaves (, 2, 4A, and B11) ertebrates (foulfide Odor nizospheres f Reduced II Reduction Stressed Pla	B13) (C1) salong Livron (C4) in Tilled Sants (D1)	ring Road	V C S ts (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Very Covered to Concave Surface Sparsely Vegetated Concave Surface Surface Surface (B4) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surface	uired; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S y (B7) Water-Stain	ned Leaves (, 2, 4A, and B11) ertebrates (foulfide Odor nizospheres f Reduced III Reduction Stressed Pla	B13) (C1) salong Livron (C4) in Tilled Sants (D1)	ring Road	V C S ts (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Very Covered to Very Covered t	uired: check all that apply Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate)	ned Leaves (, 2, 4A, and B11) entebrates (f sulfide Odor nizospheres f Reduced In Reduction Stressed Pla ain in Rema	B13) (C1) salong Liv ron (C4) in Tilled S ants (D1)	ring Road	V C S ts (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one required and second and	uired: check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) No Depth (incl	ed Leaves (, 2, 4A, and B11) entebrates (I iulfide Odor nizospheres f Reduced II Reduction Stressed Plaain in Rema	B13) (C1) salong Liv ron (C4) in Tilled S ants (D1) arks)	ring Road	V C S ts (C3) S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfafield Observations: Surface Water Present? Nater Table Present? Yes Saturation Present? Yes Saturation Present?	uired: check all that apply Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate)	ned Leaves (, 2, 4A, and (B11) entebrates (fulfide Odor (nizospheres (Reduction (Reduction (Remain in Remain (nes)	B13) (C1) salong Liv ron (C4) in Tilled S ants (D1) arks)	oils (C6)	- V - C - S - S - S - S - S - S - S - S - S - S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfateld Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes Sincludes capillary fringe)	uired: check all that apply) Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate (B8) No Depth (inclicate) Depth (inclicate)	ned Leaves (, 2, 4A, and B11) ertebrates (fulfide Odor nizospheres f Reduced II Reduction Stressed Pla ain in Rema	H 4B) B13) (C1) I along Liv Iron (C4) In Tilled S ants (D1) arks)	oils (C6)	V C S ts (C3) S F F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Staturation Visible on Aerial Imagery (C9) Secomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum of one regressions) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfacted Observations: Surface Water Present? Ves Saturation Present? Yes includes capillary fringe) Describe Recorded Data (stream gauge	uired: check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate (B8) No Depth (incline) No Depth (incline) a, monitoring well, aerial place	ned Leaves (, 2, 4A, and B11) ertebrates (fulfide Odor nizospheres f Reduced II Reduction Stressed Pla ain in Rema	H 4B) B13) (C1) Salong Liv ron (C4) in Tilled S ants (D1) arks) ous inspe	oils (C6) (LRR A) Wetla	Les (C3) Constitution of the constitution of t	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Gaturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Ghallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
VPCY VPROLOGY Netland Hydrology Indicators: Primary Indicators (minimum of one required primary Indicators (Max) Water Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfatel of Observations: Surface Water Present? Ves Saturation Present? Ves Saturation Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge	uired: check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate (B8) No Depth (incline) No Depth (incline) a, monitoring well, aerial place	ned Leaves (, 2, 4A, and B11) ertebrates (fulfide Odor nizospheres f Reduced II Reduction Stressed Pla ain in Rema	H 4B) B13) (C1) Salong Liv ron (C4) in Tilled S ants (D1) arks) ous inspe	oils (C6) (LRR A) Wetla	Les (C3) Constitution of the constitution of t	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Gaturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) Ghallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Water Table Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge	uired: check all that apply) Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or S y (B7) Other (Explicate (B8) No Depth (inclicate) Depth (inclicate)	ned Leaves (, 2, 4A, and B11) ertebrates (fulfide Odor nizospheres f Reduced II Reduction Stressed Pla ain in Rema	H 4B) B13) (C1) Salong Liv ron (C4) in Tilled S ants (D1) arks) ous inspe	oils (C6) (LRR A) Wetla	Les (C3) Constitution of the constitution of t	Vater-Stained Leaves (B9) (MLRA 1, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Carterian Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Applicant/Owner: College of Hand Land Investigator(s): M P Section, Township, Range St. Coll N B Section, Township,			FORM -	- Weste	rn Mour	ntains, Valleys, and Coast Region
Section, Township, Range Section, Township,	Project/Site: Mckylull Cely	Certy	City	//County:	Mh	h. / Hw Sampling Date: 5 31 2022
Section, Township, Range Landform (fillslope, terrace, etc.): MFM 100		1				State: 1A Sampling Point: 130 4
Suid Map Unit Name: Not designation: Are vegetation Soil or Hydrology	Investigator(s): MH		Sec	ction, Tow	nship, Ran	nge 56 OCN DIE
Soli Map Unit Name: Note dissilication: Note Cilimatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note Object of this time of year? Yes No (If no, explain in Remarks.) Note of PiNDINGS — Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No (If no, explain in Remarks.) Note of Pindings — Attach site map showing sampling point locations, transects, important features, No (If no, explain in Remarks.) Note of Pindings — No (If no, explain in Remarks.) Note of Pindings — No (If no, explain in Remarks.) No (If no, explain in Remarks or Provide support data in Remarks or 10 Hydrophytic Vegetation (Explain) indicators. (Explain) in Remarks.	Landform (hillslope, terrace, etc.): Mf	u terran	Lo	cal relief (concave, c	convex, none): Convey Slope (%): 0 -
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Nomal Circumstances" present? Yes No Are Vegetation — Soil or Hydrology adjustment? (If needed, explain any answers in Remarks.) Are Vegetation — Soil or Hydrology anaturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Within a Wetland? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Within a Wetland? Yes No Wetland Hydrology Present? Yes No Wetland No Area Wetland? Yes No Wetland No Area Wetland? Yes No Wetland No Area Wetland Hydrology Wetland No Area Wetland Yes No Wetland No Area Wetland Hydrology Wetland No Area Wetland Hydrology Wetland No Area Wetland Hydrology Wetland No Area Wetland No Area Wetland Hydrology Wetl						
Are 'Normal Circumstances' present? Yes No No Normal Circumstances' present? Yes No No Normal Circumstances' present? Yes No No Normal Circumstances' present? Yes No Normal Circumstances' present. Yes No Normal Circumstances' present in Amenators, it is the Sampled Area within a weeded, explain any answers in Remarks. In the Stratum (Plot size Normal Circumstances' present? Yes No Normal Circumstances' present. Yes No Normal Circumstances' prese		site typical for this tin	ne of year?	Yes X	No	
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, Hydrophytic Vegetation Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland Hydrology Present? Yes No State Sampled Area within a Wetland? Wetland						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transacts, important features, Hydrophytic Vegetation Present? Yes No Vestand Hydrology Present Hydrology Present Hydrology Present? Yes No Vestand Hydrology Present Hydrology Present Hydrology Present? Yes No Vestand Hydrology Present Hydrology Present Hydrology Present Hydrology Present						
Hydric Soil Present? Wetland Hydrology Present? Yes No Within a Wetland? Wetland Hydrology Present? Absolute Dominant Indicators Number of Dominant Species That Are OBL, FACW, or FAC. At Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Are Prevalence Index worksheet: Total & Cover of. Multicly by: Total Cover of. Namber of Dominant Species That Are OBL, FACW, or FAC. And Total Cover of. Total Cover of. Total Cover of. Total Cover of. Namber of Dominant Species Total Cover of. N	SUMMARY OF FINDINGS - Att	ach site map sh	owing sa	ampling	point lo	ocations, transects, important features, etc.
Wetland Hydrology Present? Absolute Dominant Indicator % Caver Species? Status Number of Dominant Species That Are OBL, FACW, or FAC. Total Number of Dominant Species That Are OBL, FACW, or FAC. Frevalence Index worksheet: Total % Cover of: Multiply by: OBL species Ox x 1 = O FACU species Ox x 2 = O FACU species Ox x 3 = O FACU species Ox x 4 = CLO UPL species Ox x 5 = SD Column Totals: IDR (A) Upl Total Mydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominant Oxer Prevalence Index = B/A = STP Hydrophytic Vegetation (Explain) Indicators of Hydrosolid Adaptations (Provide support data in Remarks or on a separate spect) - Woody Vine Stratum (Plot size: 1 - Total Cover Woody Vine Stratum (Plot size: 1 - Total Cover Woody Vine Stratum (Plot size: 1 - Total Cover Woody Vine Stratum (Plot size: 1 - Total Cover Wegetation Yes No	Hydrophytic Vegetation Present?			100	77	
VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Modern Mod	지하는 경기에 살아가면 되었다. 그런 그렇게 되었다.			1.37		Area
VEGETATION – Use scientific names of plants. Tree Stratum (Plot size	CAMBRIDGE STREET, THE CAMBRIDGE	Yes No _	<u> </u>	WITH	a vvetian	resNo
Tree Stratum (Plot size:	VEGETATION – Use scientific r	names of plants.				
That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: **Total Cover** **Total Cover** **Total Cover** **Total Cover** **Total Cover** **Total Cover** **Total Species Across All Strata: **Prevalence Index worksheet: **Total % Cover of: Multiply by: OBL species	Carrier and the second					Dominance Test worksheet:
Total Number of Dominant Species Across All Strata ### Sapling/Shrub Stratum (Plot size	Tree Stratum (Plot size:	_) _%	Cover S	pecies? _	Status	
Sapling/Shrub Stratum (Plot size Percent of Dominant Species Across All Stratum (Plot size Total Cover Prevalence Index worksheet: Total % Cover of Multiply by: OBL species Ox 1 = Ox OBL species Ox 2 = Ox Ox Ox Ox Ox Ox Ox Ox	1.				*	That Are OBL, FACVV, or FAC: (A)
Percent of Dominant Species That Are OBL, FACW, or FAC Prevalence Index worksheet:	3					
That Are OBL, FACW, or FAC Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species	4.					3
Prevalence Index worksheet: 1.			= = 1	Total Cove	er	
OBL species	Sapling/Shrub Stratum (Plot size					
FACW species	1	-			-	Total % Cover of: Multiply by:
FAC species 37 x 3 = 97 FACU species 65 x 4 = 600 In Applymentary production In Applymentary 12B y FACU In Experimentary 12B y F	3					OBL species
FACU species US x4 = ZCO Herb Stratum (Plot size: 1. And bright and the stratum of the stratum	4.					
Total Cover	5.					-7-
1. Apply and a product of the produc		T 2	=	Total Cove	er	
2. Prevalence Index = B/A = 3.79 1. And Sandy S		$\frac{1}{2}$	40		ELLU	3.20000
The state in the state of the		aun _	715	7		226
4. Auch by him 5. It has a work as 5			7.5	7		Trotalette Medical Control
2 - Dominance Test is >50% 6. Sunchus 2 7 7. Crima d 3 8. Fache Authorian 9. Planta is larger 10. 11. 11. 11. 12. 13. 14. 15. 16. 16. 17. 18. 18. 19. 19. 10. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11. 10. 11.			5	/		
6. Stricked 27th 7. Cricked 25th 8. Factor Auchardan 9. Plantage lawreta 10.			5			
8. Fight Authority 9. Plants: Authority 10. Stratum (Plot size:	6. Sancher a 741					
9. VICTOL 1. (ACCUTA) 10. Problematic Hydrophytic Vegetation (Explain) 11. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: 1. Hydrophytic Vegetation Present? Yes No Present? Yes No		_	3		UPL	4 - Morphological Adaptations (Provide supporting
9. Problematic Hydrophytic Vegetation¹ (Explain) 10. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size:	8. Lochen Auchanten	^	1 -		UPL	
11	9. Vintory Munta				EN	
Woody Vine Stratum (Plot size: 1. Hydrophytic Vegetation Present? Yes No			-			
Woody Vine Stratum (Plot size: 1. Hydrophytic Vegetation Present? Yes No	11-	-	1 c)R-1	Fotal Cove	. DU 8-54	be present, unless disturbed or problematic.
1 Hydrophytic 2 = Total Cover	Woody Vine Stratum (Plot size			TOTAL COVE	2015-2	0,6
= Total Cover Present? Yes No	1					
= Total Cover	2					
	% Bare Ground in Hash Stratum		= 7	Total Cove	er	Trosuiti 165NO
Remarks:						

	Sampling Point: 130-4
epth needed to document the indicator or confi	rm the absence of indicators.)
Redox Features	- 11 1 2 2
Color (moist) % Type¹ Loc²	
	Oly
	The state of the s
	Indicators for Problematic Hydric Soils ³ :
	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	Other (Explain in Remarks)
- 1. Table - 1. A. 1. Table - 1.	3Indicators of hydrophytic vegetation and
Depleted Dark Surface (F7)	wetland hydrology must be present,
Redox Depressions (F8)	unless disturbed or problematic.
	Hydric Soil Present? Yes No
red; check all that apply)	Secondary Indicators (2 or more required)
Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)Drainage Patterns (B10)
 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Coots (C3) Geomorphic Position (D2)
Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
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Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Coots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) C6) FAC-Neutral Test (D5) A) Raised Ant Mounds (D6) (LRR A)
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	Redox Features Color (moist) % Type¹ Loc² M=Reduced Matrix, CS=Covered or Coated Sand all LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)

roject/Site: Mchhydh Cil, Colo	City/County: Mc Ki	ntains, Valleys, and Coast Region 1/4
pplicant/Owner: Carty of the bally		State: CA Sampling Point 13/
vestigator(s): MH, (H	Section, Township, Ra	231
		convex, none): CDnCGv(Slope (%)
bregion (LRR):		Long174,107190 Datum NASS
il Map Unit Name:		NWI classification
e climatic / hydrologic conditions on the site typical for	this time of year? Yes No _	(If no, explain in Remarks)
		"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology		eeded, explain any answers in Remarks)
JMMARY OF FINDINGS - Attach site ma	ap showing sampling point	locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No Is the Sample	d Area
Netland Hydrology Present? Yes	No within a Wetla	
veg removal. Localized in	ran-made depression	and apoils mounds.
EGETATION – Use scientific names of pl	ants.	
ree Stratum (Plot size = 0m)	Absolute Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species
Sitks solve	12 N FAC	That Are OBL, FACW, or FAC (A)
711 - 1/12		Total Number of Dominant Species Across All Strata (B)
		N -
Sanling/Shruh Stratum (Plot size: 5 m	9 5 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC (A/B)
apling/Shrub Stratum (Plot size:		Prevalence Index worksheet:
•		Total % Cover of: Multiply by:
		OBL species x1=
		FACW species x2 = FAC species 115 x3 = 345
ALL CONTRACTOR OF THE PROPERTY		77
	= Total Cover	FACU species 3 / x4 = 197 8 UPL species 3 / x5 = 15 0
Briza Maxina	20 7 VP	Column Totals: 1 82 (A) 643 (B)
Anthoxanthan oderatan	25 Y FACU	201011111111111111111111111111111111111
Holes lenter	20 Y FAC	Prevalence Index = B/A = 3.53
Cortaderia Sellosas	T N FACU	Hydrophytic Vegetation Indicators:
Rehal Urginis	5 N FACU	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
7. 7. 7. 11. 1		3 - Prevalence Index is ≤3.01
•		4 - Morphological Adaptations (Provide supporting
		data in Remarks or on a separate sheet)
		5 - Welland Non-Vascular Plants ¹
0		Problematic Hydrophytic Vegetation¹ (Explain)
1.		'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
Voody Vine Stratum (Plot size 5 m	Total Cover	provent, amos distribut of provientials.
VOOGY VIITE SHARBITI (1 IOL SIZE		Hydrophytic
		Vegetation
		Present? Yes No
% Bare Ground in Herb Stratum_	= Total Cover	

	. 1.	171
Sampling Point:	TH	TA

Color (moist)	Texture Remarks Indicators PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic. Hydric Soil Present? Yes No X
Fype: C=Concentration, D=Depletion, RM=Reduced Matrix. CS=Covered or Coated Sand Grait ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Eplpedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) estrictive Layer (If present): Type: Depth (inches): Permarks: //DROLOGY //etland Hydrology Indicators: //mary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Saturation (A3) Saturation (P1) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.
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Histosol (A1) Sandy Redox (S5) Histic Eplpedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) strictive Layer (If present): Type: Depth (inches): Emarks: DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Saturation (A3) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.
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ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) estrictive Layer (If present): Type: Depth (inches): Type: Depth (inches): Emarks: //DROLOGY //OROLOGY /	Indicators for Problematic Hydric Soils³: 2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) estrictive Layer (If present): Type: Depth (inches): Beta	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.
Histic Eplpedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) estrictive Layer (If present): Type: Depth (inches): emarks: //DROLOGY //Petland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Hydrogen Sulfide (A4)	Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) estrictive Layer (If present): Type: Depth (inches): Permarks: Depth (inches): Permarks:	Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Thick Dark Surface (A12)	wetland hydrology must be present, unless disturbed or problematic.
	wetland hydrology must be present, unless disturbed or problematic.
	unless disturbed or problematic.
Type:	
Type:	Hydric Soil Present? Yes No _X
Depth (inches):	Hydric Soll Present? Yes No _X
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Hydric Soll Present? Yes No _/
/DROLOGY /etland Hydrology Indicators: //mary Indicators (minimum of one required; check all that apply) _ Surface Water (A1) Water-Stained Leaves (B9) (except _ High Water Table (A2) MLRA 1, 2, 4A, and 4B) _ Saturation (A3) Salt Crust (B11) _ Water Marks (B1) Aquatic Invertebrates (B13) _ Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	
rimary Indicators (minimum of one required; check all that apply) _ Surface Water (A1)	
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Water Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	
Saturation (A3) — Salt Crust (B11) Water Marks (B1) — Aquatic Invertebrates (B13) Sediment Deposits (B2) — Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
	Saturation Visible on Aerial Imagery (CS
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots	
Oxidized Rhizospheres along civing Roots Algal Mat or Crust (B4) Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6)	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface (B8)	
ield Observations:	
urface Water Present? Yes No _> Depth (inches):	
Vater Table Present? Yes No Depth (inches):	
	d Hudrology Process? Van
Saturation Present? Yes No Depth (inches): Wetlan includes capillary fringe)	d Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	Total -
	available
195) Fails FAC-Whital 1959 Tocalized Repression (likely anthropay	
1/2) Louis . 1.0 1000 las	

WETLAND DETERMINATION DATA	A FORM -	Western Mou	/11
Project/Site: MCC/Mylly City Chily	City/C	County:	MM Sampling Date Aug-02-
applicant/Owner: A Conty OF HE bold	+	4-	State: Sampling Point
ivestigator(s): Mills Hartness, Christics	Her Section	on, Township, Rai	nge 931 070 GLE
andform (hillslope, terrace, etc.): Mm dram	Loca	I relief (concave,	convex, none) CO1Crl Slope (%) O-3
ubregion (LRR):	Lat: 40.94	5238	Long - 124101806 Datum NA-88
oil Map Unit Name:			NWI classification:
re climatic / hydrologic conditions on the site typical for this ti	ime of year? Y	es No_	(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology sign	nificantly distur	bed? Are "	Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology nati	urally problem	atic? (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS - Attach site map sh	nowing san	npling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	-	Is the Sampled	Asso.
Hydric Soil Present? Yes NoNoNo	V	within a Wetlar	
Remarks: Sm 4/1 Stip C~13m) betw	-PIN PAIT	sing lots. Actively moment
2000			2 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
/EGETATION – Use scientific names of plants			
10.		ninant Indicator	Dominance Test worksheet:
	% Cover Spe		Number of Dominant Species
1. Alnus rubra	82	1 TAC	That Are OBL, FACW, or FAC (A)
			Total Number of Dominant Species Across All Strata (B)
4.			^ ^
Santing/Shrub Stratum (Distaire: SM)	82 = To	ital Cover	Percent of Dominant Species That Are OBL, FACW, or FAC. (A/B)
Saping/Stribb Stratum (Pibt size/			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3.			OBL species x1=
4			FACW species
5			FACU species $42 \times 4 = 68$
Herb Stratum (Plot size: h	= To	otal Cover	UPL species 28 x5 = 140
1. RLM1+ A18105/14	12 1	I FACU	Column Totals: 172 (A) 6/4 (B)
2. Briza mexima	.28 .	y UP	Prevalence Index = B/A = 3.57
3. Anthoxanthu oderation	24	1. PACV	Hydrophytic Vegetation Indicators:
4. Hacus landes	20	PAC	1 - Rapid Test for Hydrophytic Vegetation
5. Cortadoria Sellogna	7	V FACU	2 - Dominance Test is >50%
· · · · · · · · · · · · · · · · · · ·	1 -	V FACV	3 - Prevalence Index is ≤3.0¹
7			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation ¹ (Explain)
			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
11	7 -		se present siness sistained of productions.
An	90 = To	tal Cover	
Woody Vine Stratum (Plot size 5 m	90 = To	tal Cover	Hydrophytic
Woody Vine Stratum (Plot size 5 m)	<u>90</u> = To	tal Cover	Hydrophytic Vegetation
11		tal Cover	

SOIL

Sampling Point: BZ-U

Depth Matrix	Redox Features		
nches) Color (moist) %	Color (moist) %	Type Loc2	Texture Remarks
Y-12 10x13/3 100			lan -
Type: C=Concentration, D=Depletion, R	M-Daducad Matrix CS-Counted	or Coated Sand Grain	s. ² Location: PL=Pore Lining, M=Matrix
ydric Soil Indicators: (Applicable to			Indicators for Problematic Hydric Soils
Histosol (A1)	Sandy Redox (S5)		2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1)	(except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
_ Depleted Below Dark Surface (A11)	Depleted Matrix (F3)		
_ Thick Dark Surface (A12)	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7	7)	welland hydrology must be present,
_ Sandy Gleyed Matrix (S4) estrictive Layer (if present):	Redox Depressions (F8)	-	unless disturbed or problematic.
Type:			
Depth (inches):		1	lydric Soil Present? Yes No _
emarks:			Tydric Son Flesenti TesNo
/DROLOGY			
/DROLOGY /etland Hydrology Indicators:	ired check all that anniv)		Secondary Indicators /2 or more require
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ	I CT Take Make Make Note to the Take To the Company of the Company	s (PO) (sypant	Secondary Indicators (2 or more require
'DROLOGY letland Hydrology Indicators: rimary Indicators (minimum of one requ _ Surface Water (A1)	Water-Stained Leave		Water-Stained Leaves (B9) (MLRA
'DROLOGY fetland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2)	Water-Stained Leave MLRA 1, 2, 4A, si		Water-Stained Leaves (B9) (MLRA 4A, and 4B)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrate Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leave MLRA 1, 2, 4A, as Salt Crust (B11)	nd 4B)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10)
PROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requingum of the requirement of the requiremen	Water-Stained Leave MLRA 1, 2, 4A, a Salt Crust (B11) Aquatic Invertebrates	nd 4B) (B13)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
PROLOGY Setland Hydrology Indicators: rimary Indicators (minimum of one requing Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leave MLRA 1, 2, 4A, as Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd 	nd 4B) (B13) or (C1)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen
PROLOGY Tetland Hydrology Indicators: Timary Indicators (minimum of one required by the control of the contro	Water-Stained Leave MLRA 1, 2, 4A, as Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Ode Oxidized Rhizosphere	nd 4B) (B13) or (C1) es along Living Roots	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requing a Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leave MLRA 1, 2, 4A, as Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Ode Oxidized Rhizosphere Presence of Reduced	nd 4B) is (B13) or (C1) es along Living Roots if Iron (C4)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	Water-Stained Leave MLRA 1, 2, 4A, as Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction	nd 4B) s (B13) or (C1) es along Living Roots d Iron (C4) en in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
POROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one requestrated Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leave MLRA 1, 2, 4A, an Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Ode Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F	nd 4B) i (B13) or (C1) es along Living Roots d Iron (C4) en in Tilled Soils (C6) Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
PROLOGY Vetland Hydrology Indicators: Imary Indicators (minimum of one requestions) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	Water-Stained Leave MLRA 1, 2, 4A, an Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F (B7) Other (Explain in Ren	or (C1) es along Living Roots d Iron (C4) en in Tilled Soils (C6) Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requirement of some requirement o	Water-Stained Leave MLRA 1, 2, 4A, an Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed F (B7) Other (Explain in Ren	or (C1) es along Living Roots d Iron (C4) en in Tilled Soils (C6) Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
/DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one requipment of some requirement of some requipment of some requirement of some requirement of some requipment of some requirement of some r	Water-Stained Leave MLRA 1, 2, 4A, an Salt Crust (B11) Aquatic Invertebrates Hydrogen Sulfide Odd Oxidized Rhizosphere Presence of Reduced Recent Iron Reductio Stunted or Stressed R (B7) Other (Explain in Ren te (B8)	nd 4B) i (B13) or (C1) es along Living Roots d Iron (C4) in in Tilled Soils (C6) Plants (D1) (LRR A) marks)	Water-Stained Leaves (B9) (MLRA 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagen C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Appendix C

Plant Species Observed within Sample Plots

Scientific Name	Common Name	Family	NWPL Indicator Status (WMVC)
Alnus rubra	red alder	Betulaceae	FAC
Anthoxanthum odoratum	sweet vernal grass	Poaceae	FACU
Avena barbata	slim oat	Poaceae	UPL
Bellis perennis	English daisy	Asteraceae	UPL
Briza maxima	rattlesnake grass	Poaceae	UPL
Bromus hordeaceus	soft chess	Poaceae	FACU
Cerastrium fontanum	common chickweed	Caryophyllaceae	FACU
Cortaderia selloana	pampas grass	Poaceae	FACU
Cotoneaster franchetii	cotoneaster	Rosaceae	UPL
Cyperus eragrostis	flat sedge	Cyperaceae	FACW
Cytisus scoparius	Scotch broom	Fabaceae	UPL
Dactylus glomeratus	orchard grass	Poaceae	FACU
Erica lusitanica	Sapnish heather	Rosaceae	UPL
Erodium moschatum	whitestem filaree	Geraniaceae	UPL
Festuca arundinacea	reed fescue	Poaceae	FAC
Festuca perennis	Italian rye grass	Poaceae	FAC
Fragaria vesca	wild strawberry	Rosaceae	FACU
Gallium aparine	cleavers	Rubiaceae	FACU
Geranium dissectum	cutleaf geranium	Geraniaceae	UPL
Gernanium robertianum	Rpobert geranium	Geraniaceae	FACU
Hedera helix	English ivy	Araliaceae	FACU
Holcus lanatus	common velvetgrass	Poaceae	FAC
Hordeum brachyantherum	meadow barley	Poaceae	FACW
Hosackia gracilis	harlequin lotus	Fabacea	FACW
Hypochaeris radicata	hairy cats ear	Asteraceae	FACU
Ilex aquifolium	holly	Aquifoliaceae	FACU
Iris douglasii	Douglas iris	Iridaceae	UPL
Juncus bufonious	toad rush	Juncaceae	FACW
Juncus ensifolius	swordleaf rush	Juncaceae	FACW
Juncus hesperius	coast rush	Juncaceae	FACW
Leucanthemum vulgare	oxe eye daisy	Asteraceae	FACU
Linum bienne	flax	Linaceae	UPL
Lotus corniculatus	bird's foot trefoil	Fabaceae	FAC
Lotus ulginosus	marsh lotus	Fabaceae	FAC
Luzula comosa	wood rush	Juncaceae	FAC
Maianthemum dilatatum	false lily of the valley	Ruscaceae	FAC
Picea sitchensis	Sitka spruce	Pinaceae	FAC
Pinus contorta ssp. Contorta	shore pine	Pinaceae	FAC
Pinus radiata	Montery pine	Pinaceae	UPL
Plantago lanceolata	ribwort	Plantaginaceae	FACU

Scientific Name	Common Name	Family	NWPL Indicator Status (WMVC)
Poa pratensis	Kentucky bluegrass	Poaceae	FAC
Potentilla anserina	silverweed	Rosaceae	OBL
Prunella vulgaris	selfheal	Laminaceae	FACU
Pteridium aquilinum	bracken fern	Dennstaedtiaceae	FACU
Ranunculus repens	creeping buttercup	Ranunculaceae	FAC
Raphanus sativus	wild radish	Brassicaceae	UPL
Rosa gymnocarpa	dwarf rose	Rosaceae	FACU
Rubus armeniacus	Himalayan blackberry	Rosaceae	FAC
Rubus parviflorus	thimbleberry	Rosaceae	FACU
Rubus spectabilis	salmon berry	Rosaceae	FAC
Rubus ursinus	California blackberry	Rosaceae	FACU
Rumex acetosella	sheep sorrel	Polygonaceae	FACU
Rumex crispus	curley dock	Polygonaceae	FAC
Salix hookeriana	coastal willow	Salicaceae	FACW
Salix sitchensis	Sitka willow	Salicaceae	FACW
Sambucus racemosa	red elderberry	Viburnaceae	FACU
Sisyrichium californicum	golden blue eyed grass	Iridaceae	FACW
Sonchus asper	prickly sow thistle	Asteraceae	UPL
Spirea douglasii	Rose spirea	Rosaceae	FACW
Taraxacum officinale	common dandelion	Asteraceae	FACU
Trifoliem pratensis	red clover	Fabacea	FACU
Trifolium repens	white clover	Fabaceae	FAC
Vaccinium ovatum	evergreen huckleberry	Ericaceae	FACU
Vicia hirsuta	hairy vetch	Fabaceae	UPL
Vicia sativa	spring vetch	Fabaceae	UPL

Appendix D Site Photographs

Photo 1:

Description:

Wetland 1 (W1)

Sample Point 127-w

APN: 508-251-061

Representative photo of W1, a three-parameter wetland comprising 0.02 acres.

W1 is a regularly maintined stormwater detetion facility not likley juristictional to USACE, RWQCB, or the McKinleyville Communty Plan.

Location:

40.940911,-124.102562

Date:

May 31, 2023

Photo 2:

Description:

Wetland 2 (W2)

Sample Point 129-w

APN: 508-251-061

Representative photo of W2, a three-parameter wetland comprising 0.06 acres.

acies.

W2 is a regularly maintined stormwater detetion facility not likley juristictional to USACE, RWQCB, or the McKinleyville Communty Plan.

Location:

40.940715,-124.102566

Date:

May 31, 2023





Photo 3:

Description:

Wetland 3 (W3)

Sample Point 100-w

APN: 510-132-031

Representative photo of W3, a one-parameter wetland comprising 0.36 acres.

W3 is also a potential

SNC.

Location:

40.942515,-124.104384

Date:

May 30, 2023



Photo 4:

Description:

Wetland 4 (W4)

Sample Point 111-w

APN: 510-132-031

Representative photo of W4, a one-parameter wetland comprising 0.05 acres.

W4 is also a potential SNC.

Location:

40.943697,-124.109342

Date:

May 30, 2023



Photo 5:

Description:

Wetland 5 (W5)

Sample Point 122-w

APN: 510-132-031

Representative photo of W5, a one-parameter wetland comprising 0.15

acres.

Location:

40.943969,-124.106756

Date:

May 31, 2023



Photo 6:

Description:

Wetland 6 (W6)

Sample Point 124-w

APN: 510-132-031

Representative photo of W6, a one-parameter wetland comprising 0.06 acres.

Location:

40.943522,-124.106592

Date:

May 31, 2023



Photo 7:

Description:

Upland

Sample Point 101-u

APN: 510-132-031

Representative photo of upland areas at sample

point 101-u.

Location:

40.943298, -124.105157

Date:

May 30, 2023



Photo 8:

Description:

Upland

Sample Point 102-u

APN: 510-132-031

Representative photo of upland areas at sample point 102-u.

Location:

40.942820, -124.107772

Date:



Photo 9:

Description:

Upland

Sample Point 103-u

APN: 510-132-031

Representative photo of upland areas at sample

point 103-u.

Location:

40.942480, -124.105190

Date:

May 30, 2023



Photo 10:

Description:

Upland

Sample Point 104-u

APN: 510-132-031

Representative photo of upland areas at sample point 104-u.

Location:

40.942606, -124.109109

Date:



Photo 11:

Description:

Upland

Sample Point 108-u

APN: 510-132-031

Representative photo of upland areas at sample point 108-u.

Location:

40.9427856, -124.109910

Date:

May 30, 2023



Photo 12:

Description:

Upland

Sample Point 109-u

APN: 510-132-031

Representative photo of upland areas at sample point 109-u.

Location:

40.943607, -124.110190

Date:

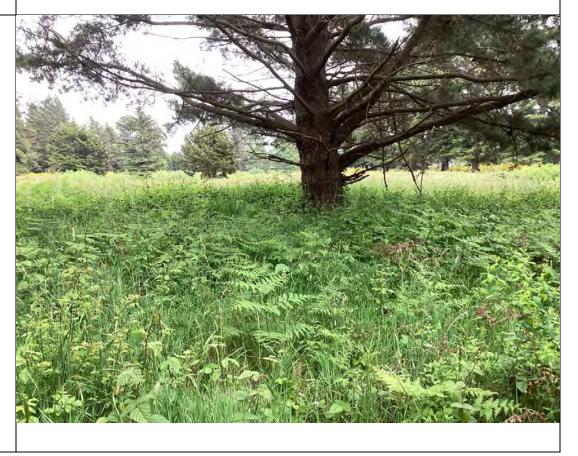


Photo 13:

Description:

Upland

Sample Point 112-u

APN: 510-132-031

Representative photo of upland areas at sample point 112-u.

Location:

40.943910, -124.108171

Date:

May 30, 2023



Photo 14:

Description:

Upland

Sample Point 114-u

APN: 510-132-031

Representative photo of upland areas at sample point 114-u.

Location:

40.942820, -124.107772

Date:



Photo 15:

Description:

Upland

Sample Point 116-u

APN: 510-132-031

Representative photo of upland areas at sample point 116-u.

Location:

40.944810, -124.105960

Date:

May 30, 2023



Photo 16:

Description:

Upland

Sample Point 119-u

APN: 510-132-031

Representative photo of upland areas at sample point 119-u.

Location:

40.943779, -124.104443

Date:



Photo 17:

Description:

Upland

Sample Point 120-u

APN: 510-132-031

Representative photo of upland areas at sample

point 120-u.

Location:

40.944168, -124.105953

Date:

May 30, 2023



Photo 18:

Description:

Upland

Sample Point 128-u

APN: 508-251-061

Representative photo of upland areas at sample point 128-u.

Location:

40.940807, -124.102504

Date:

May 31, 2023



Photo 19:

Description:

Upland

Sample Point 131-u

APN: 510-132-032

Representative photo of upland areas at sample point 131-u.

Location:

40.945204, -124.102190

Date:

August 2, 2023



Appendix E NRCS Custom Soil Resources Report

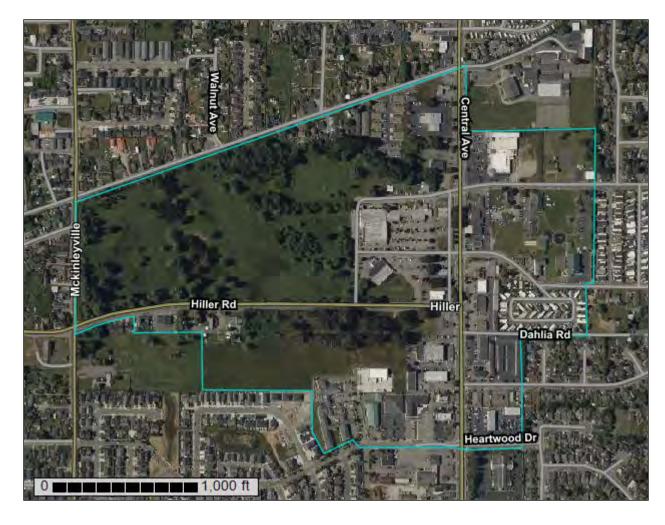


VRCS

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Humboldt County, Central Part, California

12607030-McKinleyville Town Center Soils



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

-

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

(o)

Blowout

 \boxtimes

Borrow Pit

Ж

Clay Spot

 \Diamond

Closed Depression

Š

Gravel Pit

...

Gravelly Spot

0

Landfill Lava Flow

٨.

Marsh or swamp

2

Mine or Quarry

0

Miscellaneous Water

0

Perennial Water
Rock Outcrop

Saline Spot

• • •

Sandy Spot

Slide or Slip

Severely Eroded Spot

۸

Sinkhole

Ø.

Sodic Spot

8

Spoil Area



Stony Spot
Very Stony Spot



Wet Spot Other



Special Line Features

Water Features

_

Streams and Canals

Transportation

ransp

Rails

~

Interstate Highways

US Routes

 \sim

Major Roads

 \sim

Local Roads

Background

Marie Control

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California Survey Area Data: Version 9, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Jun 1, 2022—Jun 19, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
145	Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes	82.4	56.7%
225	Arcata and Candymountain soils, 0 to 2 percent slopes	58.1	39.9%
226	Arcata and Candymountain soils, 2 to 9 percent slopes	5.0	3.4%
Totals for Area of Interest	1	145.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Humboldt County, Central Part, California

145—Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 23d0g

Elevation: 10 to 120 feet

Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 275 to 325 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Halfbluff and similar soils: 35 percent Tepona and similar soils: 30 percent Urban land, residential: 25 percent Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Halfbluff

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 11 inches: fine sandy loam BA - 11 to 18 inches: fine sandy loam Bw - 18 to 35 inches: sandy loam CB - 35 to 43 inches: sandy loam 2C1 - 43 to 55 inches: loamy sand 2C2 - 55 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: About 30 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: C

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern,

marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Description of Tepona

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material

A1 - 2 to 12 inches: loam

A2 - 12 to 25 inches: very fine sandy loam

Bw1 - 25 to 35 inches: sandy loam Bw2 - 35 to 41 inches: sandy loam C1 - 41 to 49 inches: sandy loam C2 - 49 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: About 30 to 39 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: C

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern,

marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Description of Urban Land, Residential

Settina

Landform: Alluvial fans

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Talawa

Percent of map unit: 5 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

Tillas

Percent of map unit: 3 percent

Landform: Alluvial fans

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Convex Hydric soil rating: No

Hookton

Percent of map unit: 2 percent Landform: Erosion remnants

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: No

225—Arcata and Candymountain soils, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2lmt0

Elevation: 10 to 290 feet

Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 275 to 325 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Arcata and similar soils: 50 percent

Candymountain and similar soils: 35 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from mixed

Typical profile

A - 0 to 23 inches: fine sandy loam
AB - 23 to 37 inches: very fine sandy loam
Bw - 37 to 51 inches: fine sandy loam
C - 51 to 67 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): 1 Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from mixed

Typical profile

A1 - 0 to 11 inches: fine sandy loam
A2 - 11 to 19 inches: fine sandy loam
Bt1 - 19 to 38 inches: fine sandy loam
Bt2 - 38 to 48 inches: fine sandy loam
BCt - 48 to 55 inches: sandy loam
C - 55 to 63 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-

salmonberry/western swordfern-deer fern, marine terraces, loam

Hydric soil rating: No

Timmons

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Halfbluff

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern, marine terraces, marine deposits, fine sandy loam

Hydric soil rating: No

Talawa

Percent of map unit: 2 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

226—Arcata and Candymountain soils, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2lmt1

Elevation: 10 to 310 feet

Mean annual precipitation: 35 to 90 inches Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 275 to 325 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Arcata and similar soils: 50 percent

Candymountain and similar soils: 35 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arcata

Settina

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 27 inches: loam
AB - 27 to 36 inches: loam
Bw - 36 to 63 inches: sandy loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Description of Candymountain

Setting

Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Marine deposits derived from sedimentary rock

Typical profile

A - 0 to 17 inches: fine sandy loam
Bw - 17 to 55 inches: fine sandy loam
C - 55 to 79 inches: loamy very fine sand

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

Minor Components

Urban land, residential

Percent of map unit: 4 percent Landform: Marine terraces Hydric soil rating: No

Halfbluff

Percent of map unit: 4 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX118CA - Sitka spruce-redwood/salal/western brackenfern,

marine terraces, marine deposits, fine sandy loam

Other vegetative classification: Forest Type IV, coastal (RNPF004CA)

Hydric soil rating: No

Megwil,

Percent of map unit: 3 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX120CA - Redwood-Sitka spruce/California huckleberry-

salmonberry/western swordfern-deer fern, marine terraces, loam

Hydric soil rating: No

Talawa

Percent of map unit: 2 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Concave Across-slope shape: Concave

Hydric soil rating: Yes

Timmons

Percent of map unit: 2 percent Landform: Marine terraces

Landform position (two-dimensional): Backslope Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Linear

Ecological site: F004BX121CA - Redwood-Sitka spruce/salal-California

huckleberry/western swordfern, marine terraces, marine deposits, sandy loam

and loam

Hydric soil rating: No

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Appendix F

NOAA Regional Climate Center WETS Table

WETS Station: ARCATA EUREKA AP, CA													
Requested years: 1993 - 2023													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	56.0	40.2	48.1	6.91	4.53	8.30	12	-					
Feb	55.6	39.5	47.6	6.50	3.54	7.93	11	-					
Mar	56.0	40.5	48.3	6.52	4.46	7.78	12	-					
Apr	57.0	42.1	49.5	3.95	2.54	4.75	9	-					
May	59.3	45.7	52.5	1.93	0.91	2.36	5	-					
Jun	62.2	48.3	55.3	0.95	0.31	1.09	2	-					
Jul	63.2	51.2	57.2	0.17	0.04	0.17	0	-					
Aug	64.2	51.2	57.7	0.19	0.05	0.20	0	-					
Sep	64.7	48.4	56.6	0.93	0.29	1.06	2	-					
Oct	62.8	44.9	53.8	2.97	1.03	3.57	5	-					
Nov	58.5	41.8	50.2	5.90	3.96	7.06	10	-					
Dec	55.5	39.6	47.5	8.84	5.40	10.70	13	-					
Annual:					38.77	49.95							
Average	59.6	44.4	52.0	-	-	-	-	-					
Total	-	-	-	45.75			80	-					
GROWING SEASON DATES													
Years with missing data:	24 deg = 0	28 deg = 1	32 deg = 2										
Years with no occurrence:	24 deg = 30	28 deg = 10	32 deg = 0										
Data years used:	24 deg = 31	28 deg = 30	32 deg = 29										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	No occurrence	1/11 to 1/17: 371 days	3/28 to 11/26: 243 days										
70 percent *	No occurrence	No occurrence	3/19 to 12/6: 262 days										
* Percent chance of the growing season occurring between the Beginning and Ending dates.			,-										
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1945					M4.07	MT	0.01	M0.00	M0. 37	4. 60	13. 01	12. 89	34. 95
1946	5.01	6.44	5.31	M0.50									17. 26
1947													
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1998		14.12	8.13	2.33	4.51	0.24	0.06	0.02	0. 28	4. 65	16. 57		50. 91
1999	5.80	12.28	9.94	2.42	2.31	0.06	0.01	0.25	0.	1.	8.	3.	46.
1999	3.00	12.20	9.94	2.42	2.31	0.00	0.01	0.23	01	53	32	66	59
2000	12.80	8.67	3.09	3.78	2.77	1.08	0.02	0.02	0.	3.	4.	2.	43.
									44	37	26	76	06
2001	3.92	4.53	2.21	3.07	0.99	1.00	0.17	0.23	0. 41	1. 78	9. 54	11. 41	39. 26
2002	7.56	6.95	4.75	3.06	0.70	0.83	0.07	0.04	0.	0.	2.	22.	49.
2002	1.50	0.50	7.10	5.00	0.70	0.03	0.01	0.04	u. 19	0. 06	2. 36	96	49. 53
2003	7.81	3.78	5.63	12.92	1.45	0.11	0.04	0.58	0.	0.	6.	12.	52.
									55	56	80	97	48
2004	6.71	9.07	2.59	2.07	1.14	0.07	0.11	0.70	0. 63	4. 98	1. 71	9. 11	38. 89
2005	5.54	2.16	6.13	6.55	4.86	4.10	0.10	0.14	0.	3.	9.	13.	56.
2000	J.J .	2.10	0.13	0.00	7.00	7.10	0.10	0.14	17	3. 42	38	99	54
2006	11.94	5.97	10.63	4.50	1.48	0.56	0.08	0.10	0.	0.	9.	9.	55.
									17	70	50	68	31
2007	2.63	13.11	3.66	3.71	0.95	0.67	0.86	0.12	1. 03	5. 73	3. 23	7. 78	43. 48
									US	13	23	10	40

2008	10.26	3.65	4.79	2.40	0.10	0.40	0.09	0.82	0. 18	1. 13	5. 08	10. 01	38. 91
2009	2.06	6.78	6.78	1.38	3.86	0.31	0.19	0.14	0. 63	2. 45	4. 34	5. 08	34. 00
2010	10.49	5.38	6.76	8.36	3.58	3.46	0.10	0.21	2. 00	5. 29	6. 35	12. 38	64. 36
2011	2.69	4.66	12.57	5.07	1.72	1.31	0.25	M0.05	M0. 37	5. 16	4. 64	3. 31	41. 80
2012	9.11	M2.12	12.65	5.66	1.08	2.41	0.76	0.08	0. 10	3. 55	6. 93	11. 06	55. 51
2013	2.94	2.00	3.47	2.24	1.88	0.78	0.00	0.10	4. 37	0. 05	1. 70	0. 98	20. 51
2014	2.16	7.90	8.85	1.84	1.05	0.73	Т	0.00	3. 23	5. 74	5. 11	9. 96	46. 57
2015	2.07	5.59	3.78	2.39	0.10	0.07	0.13	0.51	0. 59	1. 10	5. 30	18. 77	40. 40
2016	12.30	2.93	10.48	3.27	0.64	0.11	0.59	0.02	Т	12. 03	7. 20	8. 22	57. 79
2017	11.03	14.24	10.09	5.32	1.26	0.72	0.01	0.01	0. 73	1. 81	8. 55	2. 31	56. 08
2018	9.19	2.97	8.35	5.34	0.97	0.48	0.02	0.02	0. 32	0. 89	5. 68	5. 40	39. 63
2019	8.39	16.09	5.39	3.64	3.11	Т	0.02	0.46	3. 21	2. 08	2. 05	7. 88	52. 32
2020	9.26	1.01	2.80	2.11	5.66	0.53	MT	0.02	0. 77	0. 60	3. 27	5. 14	31. 17
2021	6.81	6.15	4.29	0.67	0.33	1.93	0.11	0.01	1. 68	5. 40	3. 79	6. 73	37. 90
2022	2.92	0.41	2.18	5.08	2.64	2.73	0.60	Т	0. 52	0. 21	6. 47	10. 49	34. 25
2023	6.39	6.47	9.56	3.42	1.15	0.09	0.01	M0.00					27. 09

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2023-08-11



→ The Power of Commitment





Aquatic Resources Delineation Report

L&A Enterprises Project

Prepared for the Pierson Company

GHD | 718 Third Street, Eureka, California, 95501 USA 11203183 | 03 | Report No 1 | August 4, 2021

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1. Introduction

On behalf of the Pierson Company, GHD prepared this Aquatic Resources Delineation Report (also known as a wetland delineation report), and accompanying appendices, in support of the L&A Enterprises Project (Project) in McKinleyville, Humboldt County, CA. This report provides an investigation into whether wetlands and/or other aquatic resources are present in the Project Study Boundary (PSB), and can support future environmental documentation, permitting, and construction planning for the Project as deemed appropriate. The proposed PSB totals approximately 57.5 acres and includes the entirety of Assessor Parcel Number (APN) 510-132-031. The PSB includes the ditch along McKinleyville Avenue as this ditch is within the property boundary. The ditch along Hiller Road is not on the property and at this time has not been mapped as part of this delineation effort. Once access points to the proposed development are identified across the Hiller Road ditch, these areas will be mapped and a determination made if those sections of the Hiller Road ditch are wetlands or uplands. This report is subject to, and must be read in conjunction with, the limitations set out in Section 4, Special Terms and Conditions, and the assumptions and qualifications contained throughout the report.

Previous wetland delineations have been completed on the site. A reconnaciance wetland delineation was completed in 2019 and a map created. This GHD 2021 wetland and aquatic resurce delineation superceeds all previously prepared wetlands mapping of the site.

1.1 Site Description and History

The PSB consists of grassy and vegetated open space and a shopping center to the east of the parcel. The PSB is surrounded by Railroad Drive to the north, the McKinleyville Shopping Center to the east, Hiller Road to the south, and McKinleyville Avenue to the west. The property is generally flat, however a depression exists in the center of the PSB, which spans generally south east to north east from Hiller Road to Railroad Drive. The site has been used for grazing, but no grazing was taking place during the field investigations.

1.2 Project Description

The Project is an investigation of uplands and wetlands on the parcel to inform future development.

1.3 Regulatory Background

1.3.1 Federal

Waters of the United States

The Code of Federal Regulations (CFR), 40 CFR § 120.2 states, "Waters of the United States means:

- Jurisdictional waters. For purposes of the Clean Water Act, 33 U.S.C. 1251 et seq. and its implementing regulations, subject to the exclusion in paragraph (2) of this section, the term "waters of the United States" means:
 - The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;

- ii) Tributaries;
- iii) Lakes and ponds, and impoundments of jurisdictional waters; and
- iv) Adjacent wetlands.
- 2. Non-jurisdictional waters. The following are not "waters of the United States":
 - i) Waters or water features that are not identified in paragraph (1)(i, ii, iii, iv) of this definition;
 - ii) Groundwater, including groundwater drained through subsurface drainage systems;
 - iii) Ephemeral features, including ephemeral streams, swales, gullies, rills and pools;
 - iv) Diffuse stormwater run-off and directional sheet flow over upland;
 - v) Ditches that are not waters identified in paragraph (1)(i or ii), and those portions of ditches that occur adjacent to wetlands that do not satisfy the conditions of paragraph (3)(i) of this definition;
 - vi) Prior converted cropland;
 - vii) Artificially irrigated areas, including fields flooded for agriculture production, that would revert to upland should application of irrigation water to that area cease;
 - viii) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional water that meet the conditions of paragraphs (3) (vi) of this definition;
 - ix) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdicional waters for the purpose of obtaining fill, sand, or gravel;
 - x) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
 - xi) Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and
 - xii) Waste treatment systems.
- 3. **Definitions.** Below is an excerpt of some definitions from 40 CFR § 120.2 related to this Project.
 - i) Ordinary High Water Mark. The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
 - ii) Upland. The term upland means any land area that under normal cicrumstances does not satisfy all three wetland factors (i.e. hydrology, hydrophytic vegetation, hydric soils) identified in the wetlands definition, and does not lie below the ordinary high water mark or the high tide line of a jurisdictional water.
 - iii) Wetlands. The term wetlands means areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands Delineation Manual

In addition, the 1987 Corps of Engineers- Wetlands Delineation Manual states, "If hydrophytic vegetation is being maintained only because of (hu)man-induced wetland hydrology that would no longer exist if the activity (e.g., irrigation) were to be terminated, the area should not be considered a wetland," (USACE 1987).

1.3.2 State

The State Water Resources Control Board's (SWRCB) April 2019 *Procedures for Discharges of Dredged or Fill Material to Waters of the State* says, "An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation".

The Water Code defines "waters of the state" broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." "Waters of the state" includes all "waters of the U.S." The following wetlands are waters of the state:

- 1. Natural wetlands,
- 2. Wetlands created by modification of a surface water of the state, and
- 3. Artificial wetlands that meet any of the following criteria:
 - a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
 - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
 - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
 - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
 - i. Industrial or municipal wastewater treatment or disposal,
 - ii. Settling of sediment,
 - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
 - iv. Treatment of surface waters,
 - v. Agricultural crop irrigation or stock watering,
 - vi. Fire suppression,
 - vii. Industrial processing or cooling,

- viii. Active surface mining even if the site is managed for interim wetlands functions and values.
- ix. Log storage,
- x. Treatment, storage, or distribution of recycled water, or
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
- xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state" (SWRCB 2019).

The April 2020 Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State further clarifies, "Human activity can cause changes to the surrounding landscape (e.g., grading activities, road construction, direct hydromodification) such that wetlands form where wetlands did not previously exist. Where such artificial wetlands are now a relatively permanent part of the natural landscape, and are not subject to ongoing operation and maintenance, they are waters of the state. By requiring that the wetlands are relatively permanent, the framework excludes wetlands that are temporary or transitory. That they are part of the natural landscape also indicates the relative permanence of the wetlands and suggests that the wetland is self-sustaining without ongoing operation and maintenance activities, and provides similar ecosystem services as natural wetlands. By way of example, this category of wetlands includes situations where water flow is permanently redirected as the result of human activity, such as grading in another area, such that new wetlands form in areas that were previously dry. These wetlands may not be natural wetlands because they result from human activity and they were not formed by modifying a water of the state (rather they were an indirect result), but nevertheless they take on the function of natural wetlands such that they should be considered waters of the state. This category would not include artificial wetlands constructed for specific purposes listed in section II.3.d because the artificial wetland would likely require ongoing maintenance such that they would not be deemed "relatively permanent," and/or the artificial wetland is not part of the "natural landscape" (SWRCB 2020). None of the state documents from 2019 or 2020 address ditches.

1.4 Summary

GHD conducted the aquatic resources delineation fieldwork on July 16th, July 31st (only upland soil pits dug, no data sheets collected), August 9th (only upland soil pits dug, no data sheets collected), August 11th, August 12th 2020 and on March 11th, March 25th, and March 26th, 2021. The delineation was conducted within the approximately 57.5-acre PSB, as shown in Figure 1 (Summer Wetland Delineation) and Figure 2 (Winter Wetland Delineation) of Appendix A. GHD field staff walked throughout the PSB to observe indications of potential United States (U.S.) Army Corps of Engineers (USACE) three-parameters wetlands (based on wetland indicative vegetation, hydric soils, and wetland hydrology), and top of bank boundaries of observed ditches. Six distinct three-parameter wetlands were observed and delineated using a three-parameter wetlands approach (further described below in Methodology), and a ditch (parallel to McKinleyville Avenue) was observed and its top of bank and flowline were delineated (mapped) based upon physical indicators.

Figure Set 1 in Appendix A shows the results of the summer deliniation. Figures 1.0, and 1.1 through 1.5, in Appendix A, show the specific areas investigated during the summer delination of 2020. Figures 2.0, and 2.1 through 2.5 in Appendix A, present the results of the winter investigation. Figures 2.1 through 2.5 in Appendix A show the specific locations and results of the 2021 winter groundwater monitoring at the site. Monitoring pits were dug by hand and depth to saturation was measured in order to make the wet/dry determinination. Where water saturation was found to be less than 12-inches below the surface, the pit was determined to be wet. If water was greater 12-inches below the surface, the pit was dry. Figure set 3 in Appendix A shows the difference between the summer and winter deliniations. Figures 3.0 and 3.1 through 3.5 in Appendix A show where Wetland 3 and Wetland 6 expanded in size, as well as the areas in which Wetland 3 decreased in size based on winter 2021 hydrology data.

Figure set 4 in Appendix A, Figures 4.0, and 4.1 through 4.5, present the final wetland delineation based on analysis of the data collected in the summer and winter investigations. Datasheets documenting conditions observed during the investigations are provided in Appendix B. Climatological data for 2020 can be found in Appendix C.

2. Methodology

2.1 Aquatic resources delineation approach

Two GHD staff (one botanist and one soil scientist) conducted the aquatic resources delineation. To define a wetland, the USACE requires that vegetation, soil, and hydrology (three-parameters) all show wetland attributes (USACE 1987; USACE 2010). The aquatic resources delineation used USACE criteria from the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (USACE 2010), and A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (USACE 2014). The SWRCB also requires soils, vegetation and hydrology (three-parameters) to be present to be considered a State wetland.

Typically, vegetation, soil, and hydrology data are collected in a transect across the upland/wetland boundary with two plots (upland/wetland) per transect. In general, the naming convention used on datasheets to designate upland or wetland plots associated with a transect is -U or -W, respectively, along with the designaged wetlands (i.e. W1). Top of bank data is typically collected via visual indicators showcasing shelving, and/or the presence of litter and debris at a particular elevation.

Observed three-parameter wetland/upland boundaries and plots, and top of bank boundaries, are typically mapped in the field with a Trimble Geo 7X Handheld Global Positioning System (GPS) with the Global Navigation Satellite System (GNSS) capability running ArcPad geographic information system (GIS) software, which is attached to an external antenna to establish sub-meter accuracy.

Collected data is post-processed using GPS Pathfinder office, which referenced UNAVCO base stations. The points were then connected in the office using elevation data and ArcMap software for figure creation. Appendix B contains all datasheets recorded during the aquatic resources delineation mapping.

2.2 Botanical methodology

Vegetation data collection consisted of listing the dominant species in the herbaceous, shrub, and tree layer observed throughout the PSB. The species' wetland indicator status for the Western

Mountains, Valleys, and Coast Region was then denoted in the respective column, using the standard reference: *State of California 2016 Wetland Plant List* (Lichvar et al. 2016). This list classifies species based on the probability that they are found in wetlands (USACE 1987), ranging from Obligate (almost always in wetlands) [OBL], Facultative/wet (67% to 99% in wetlands) [FACW], Facultative (34% to 66% in wetlands) [FAC], Facultative/up (1% to 33% in wetlands) [FACU], or Uplands (less than 1% in wetlands) [UP]. Species that do not appear on the list are considered to be in the upland category (Lichvar et al. 2016). Standard procedures for documenting hydrophytic vegetation indicators were used per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010). At some transects the prevalence indices were calculated.

2.3 Soils methodology

Hydric soils were defined based on the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010) procedures in combination with the Natural Resources Conservation Service's (NRCS) definitions presented in *Field Indicators of Hydric Soils in the United States* (USDA/NRCS 2018). Soil pits were dug to an approximate depth of between 13 and 17 inches in various locations to confirm uplands or hydric soils. Data on soil color, texture, and redoximorphic features were recorded. Any observed redoximorphic features (iron concentrations) were noted along with their percentage within the soil matrix, and care was taken to distinguish chromas of 1 and 2 indicative of an iron-depleted soil within 12 inches of the soil surface (USACE 2010; USDA/NRCS 2018).

The *Munsell Soil Color Book* (COLOR, M. 2000) was used to describe the soil colors for the entire depth of the test pit. Moist, natural soil aggregate (ped) surfaces, which had not been crushed, were used to determine the soil's color. Soils with low chroma were verified as being hydric or upland with *Field Indicators of Hydric Soils in the United States* (Version 8.2, 2018).

2.3.1 Existing Soils Information

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) identifies two soil units within the PSB: Halfbluff-Tepona-Urban Land(0 to 2 percent slopes), and Arcata and Candymountain soils (0 to 2 percent slopes), (see Figure 5 in Appendix A). A brief map unit description, as generated by the NRCS, is provided for each soil unit below (NRCS 2020).

While the soil units are informative, the mapping scales are usually too broad to characterize the small scale of the PSB features accurately.

Halfbluff-Tepona-Urban Land, 0 to 2 percent slopes

The map unit composition is as follows: 35 percent Halfbluff and similar soils, 30 percent Tepona and similar soils, 25 percent Urban Land, residential and 10 percent minor components. The Halfbluff-Tepona soil type setting includes marine terraces, backslopes or tread of marine deposits derived from sedimentary rock parent material. The Urban Land soil setting includes alluvial fans.

For the Halfbluff portion of the soil complex, depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is moderate, or about 7.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability

classification is 1, and non-irrigated land capability classification is 2s1. The hydrologic soil group is C. The soil series unit is inherently not hydric.

For the Tepona portion of the soil complex, depth to a restrictive feature is more than 80 inches. The natural drainage class is moderately well-drained. The depth to the water table is approximately 30 to 39 inches. There is no inherent ponding or flooding frequency. The available water storage in a soil profile is high, or about 9.4 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 2s. The hydrologic soil group is C. The soil series unit is inherently not hydric.

For the Urban Land portion of the soil complex, depth to a restrictive, drainage classes and frequency of ponding or flooding is not stated. Irrigated land capability classification is not specified, and non-irrigated land capability classification is 8. The hydrologic soil group is not stated. The soil series unit is not considered hydric.

The descriptions of the minor components are as follows: five percent Talawa (considered hydric), three percent Tillas (not considered hydric), and two percent Hookton (not considered hydric) (NRCS 2020).

Arcata and Candymountain soils, 0 to 2 percent slopes

The map unit composition is as follows: 50 percent Arcata and similar soils, 35 percent Candymountain and similar soils, and 15 percent minor components. The Arcata and Candymountain soil setting includes marine terraces, backslopes or tread of marine deposits derived from mixed sources of parent material.

For Arcata soil, depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is 1 and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

For Candymountain soil, depth to a restrictive feature is more than 80 inches. The natural drainage class is well-drained. The depth to the water table is more than 80 inches. There is no inherent frequency of ponding or flooding. The available water storage in a soil profile is moderate, or about 8.9 inches, and the capacity of the most limiting layer to transmit water is moderately high to high, or about 0.60 to 2.00 inches per hour. Irrigated land capability classification is not specified and non-irrigated land capability classification is 2s. The hydrologic soil group is B. The soil series unit is inherently not hydric.

The descriptions of the minor components, which are mostly inherently not hydric except for the Talawa soil series, are as follows: four percent Urban land, three percent Timmons, three percent Halfbluff, three percent Megwil, and two percent Talawa (NRCS 2020).

2.3.2 Precipitation and Hydrology

GHD performed the investigation on July 16th, July 31st, August 9th, August 11th, and August 12th 2020. A National Environmental Satellite (NES) station exists approximately one mile south of the Project, and the record of climateological observation for 2020 (NCEI 2020) is provided in Appendix C. Weather data from the McKinleyville 2.7 SE NES station recorded: zero inches of precipitation to

have fallen in the last 14-days, and zero precipitation falling the day of the July 16th 2020 survey; and: 0.17-inches of precipitation to have fallen in the last 14-days, and trace precipitation falling the day of the August 11th 2020 survey and zero precipitation falling the day of the August 12th 2020 survey (Appendix C NCEI 2020).

GHD returned on March 11th, March 25th, and March 26th, 2021 for additional delineation investigations. Precipitation data recorded at the McKinleyville 2.7 SE NES station for the 2021 monitoring dates are provided in Table 1, including total rainfall accumulation to that date in the 2021 water year (WY), from October 1, 2020 to September 30, 2021. GHD's monitoring started on March 11th, and precipitation for WY 2021 was 53.79% of annual average (46.25-inches).

Table 1. McKinleyville Precipitation for WY 2021

Date	Daily Rainfall (inches)	Cummulative WY Rainfall to Date (inches)	Percent of Annual Average (46.25")
2/18/2021	0.74	21.34	46.14%
2/26/2021	0.02	21.97	47.50%
3/11/2021	0.00	24.88	53.79%
3/25/2021	Trace	26.26	56.78%
3/26/2021	0.00	26.26	56.78%

Table 2 presents NRCS WETS table data for the years 1998-2021. The NRCS WETS data includes the mean monthly below normal, normal, and above normal precipitation values for the period of 1998-2021 (AgACIS 2021).

Table 2. McKinleyville CA WETS table 1998-2021

Average Precipitation (inches)				
Month	30% Chance to be Below Normal	Normal (Average)	30% Chance to be Above Normal	
January	4.65	7.11	8.54	
February	4.00	6.75	8.2	
March	4.58	6.58	7.82	
April	2.47	3.92	4.73	
May	0.88	1.94	2.36	
June	0.29	0.87	1.00	
July	0.04	0.16	0.16	
August	0.06	0.20	0.23	
September	0.27	0.91	1.02	
October	1.09	2.99	3.6	
November	3.94	5.96	7.15	
December	5.28	8.86	10.75	
Total	27.55	46.25	55.56	

McKinleyville precipitation data for for the 2021 WY is shown in Figure 2.3.2. Below normal, normal, and above normal rainfall data from the WETS Table for McKinleyville, are shown for comparison.

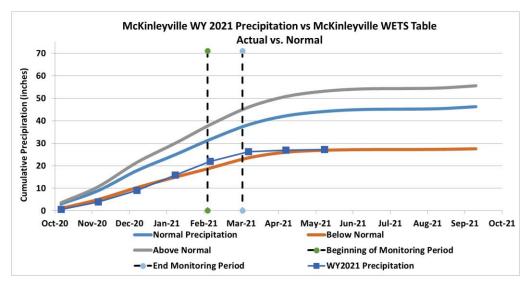


Figure 2.3.2. McKinleyville CA WY 2021 Precipitation and WETS graph

The National Wetland Inventory Mapper and aerial impagery were referenced before conducting fieldwork and is included as Figure 6 in Appendix A (NWI 2020). According to the National Wetland Invetory Mapper, palustrine emergent wetlands exist in the central and western portions of the PSB. The Project is located outside of the 100-year (or 1%) flood zone, and the FEMA flood hazard map is also included as Figure 7 in Appendix A. Observed primary and secondary wetland hydrology indicators, such as sediment deposits (primary indicator), and geomorphic position and FAC-Neutral test (secondary indicators), were recorded on the data sheets in the field.

Hydrology within the PSB includes an intermittent ditch along the western property boundary. An additional intermittent ditch exists adjacent to the property boundary along Hiller Road. The site hydrology is affected by surface runoff from the shopping center and ditch and surface runoff from Hiller Road.

3. Results

The PSB was surveyed, and six three-parameter wetlands (W1 through W6), and one aquatic resources (a ditch) was observed (see Figure set 1, 2, 3, and 4 in Appendix A). A total of 18 upland, and 16 wetland plots were observed for hydrophytic vegetation, hydric soils and wetland hydrology. Six wetlands were observed, three of which are isolated wetlands (W1, W2 and W4). The ditch located along McKinleyville Avenue is likely regulated as an aquatic resources by USACE, and is likely regulated by the Regional Water Quality Control Board. Consultation with agencies is necessary to determine jurisdictional status. Acreages of aquatic resources are presented below in Table 3.

An upland pit was dug in conjunction with each wetland plot to determine the extent of wetland influence and boundary of upland areas. Two additional upland plots were dug along Railroad Avenue (northern property boundary is a ditch) to determine soil characteristics, which yielded upland soils. Throughout the PSB, the upland pits generally have chromas greater than 2 with the majority containing chromas of 3, and a few areas containing soils with chromas of 4. Some upland

pits exhibited redoximorphic features, however the soil chromas were greater than 2 and therefore the upland pits are not considered hydric soils, or three-parameter wetlands. Typical soil colors in upland plots were observed as 10 YR 3/2, 10 YR 3/3 and 10 YR 2/2. Common vegetation observed at upland plots include: *Rubus ursinus* (California blackberry), *Holcus lanatus* (velvet grass), *Anthoxanthum odoratum* (sweet vernal grass), *Agrostis stolonifera* (creeping bentgrass), and *Lotus corniculatus* (bird's-foot trefoil).

Wetland plots generally had chromas of 2 or less, and contained redoximorphic features. Typical soil colors in wetland plots were observed as 10 YR 3/2, 10 YR 2/1, and 10 YR 2/2. The colors of redoximorphic features were typically observed as 7.5 YR 4/6, 7.5 YR 3/4, and 7.5 YR 4/4. Common vegetation observed at wetland plots include: *Agrostis stolonifera* (creeping bentgrass), *Lotus corniculatus* (bird's-foot trefoil), *Juncus hesperius* (coast rush), *Ranunculus repens* (creeping buttercup), and *Holcus lanatus* (velvet grass). Wetland hydrology was present in the wetland plots, due to either primary indicators including sediment deposits, or more commonly due to secondary indicators including geomorphic position, or a FAC-Neutral Test.

Table 3. Acreages of Aquatic Resources in PSB

Aquatic Resource	Summer Delineation 2020 (Acreage)	Final Delineation 2021 (Acreage)
Wetland 1 (W1)	0.12	0.12
Wetland 2 (W2)	0.03	0.03
Wetland 3 (W3)	4.48	3.69
Wetland 4 (W4)	0.04	0.04
Wetland 5 (W5)	0.65	0.75
Wetland 6 (W6)	0.21	0.21
Top of Bank (TOB)	0.15	0.15

Wetland 1 is entirely resultant of runoff from the shopping center to the east. Drainage from the center flows into drop inlets and into a stormwater system. This culvert discharges onto the property about 110 feet west of the easterly property boundary. This wetland is entirely fed from stormwater runoff, containing debris and refuse and appears to be dug per it's linear shape. Stormwater infiltration occurs within this wetland area. Vegetation in this wetland is predominantly nonnative species. Wetland 1 does not reach Wetland 3, and is not continuous. The quality of Wetland 1 is considered low.

Wetlands 2 and 4 are isolated wetlands with no apparent inlet or outlet and do not appear to be hydrologically connected to other wetlands on the property (no obvious topographic low area, channel, etc.). Vegetation in these wetlands is predominantly nonnative species. The quality of these wetlands is considered low to medium.

Wetland 3 is a south east to north west trending swale, that appears to take surface runoff from the east, and ditch road (Hiller) runoff from the south. The ditch on the north side of Hiller road is intermittent and not continuous. The ditch exists east of the commencement of Wetland 3, but then ceases to exist. The westerly flowing water in the existing ditch, and likely stormwater runoff from Hiller Road, discharges onto the site. Wetland 3 appears to be significantly affected by the ditch and road stormwater runoff. Humboldt County (the County) is responsible for the ditch maintenance on the ditches associated with Railroad Drive, McKinleyville Avenue and Hiller Road. In Fall 2020, the County conducted maintenance on the ditch along Hiller Road, potentially resulting in decreased flows running across the PSB causing Wetland 3 to shrink in some areas and expand in others. Vegetation in this wetland is predominantly nonnative species. The quality of Wetland 3 is considered to be medium.

Allegedly Wetlands 5 and 6 were dug out to collect surface water from the site into a low area prior to discharge into the McKinleyville Avenue ditch. Areas of these wetlands do appear to have been excavated as some of the wetlands are very linear (portion of Wetland 5). These wetlands connect prior to discharge into the McKinleyville Avenue ditch. Vegetation in these wetlands is predominantly nonnative species. The quality of Wetlands 5 and 6 is considered low to medium.

4. Special Terms and Conditions

4.1 Purpose of this Report

GHD prepared this report for the Pierson Company, and the Pierson Company may only use and rely on this report for the purpose agreed upon between GHD and the Pierson Company, as set out in the scope and contract for work effort reported herein. GHD Inc. is not liable for any action arising out of the reliance of any third party on the information contained within this report. GHD otherwise disclaims responsibility to any entity other than the Pierson Company arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

4.1 Scope and Limitations

This report does not authorize any individuals to develop, fill, or alter the delineated wetlands. Verification of the delineation by jurisdictional agencies is necessary prior to the use of this report for planning and development purposes. A USACE, agency-stamped, delineation map, and a jurisdictional approval letter are required to signify confirmation of delineation results. In situations where a field investigation determines that no jurisdictional wetlands occur, jurisdictional concurrence with these findings is recommended.

The delineation conclusions were based on the information available during the period of the investigation, which took place on July 16th, July 31st, August 9th, August 11th and August 12th, 2020 and on March 11th, March 25th, and March 26th, 2021. The opinions, conclusions, and any recommendations in this report are based on conditions encountered and information reviewed by the date of preparation of the report. Site conditions may change after the date of this report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change unless contracted to do so.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and any recommendations in this report are based on the information obtained from and testing undertaken at or in connection with specific sample points.			

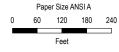
5. References

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Appendix A – Figures









Pierson Company Pierson Consulting As Requested

Delineation Overview

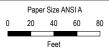
Summer Wetland

Project No. 11203183 Revision No. -

Date 05/18/2021











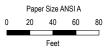
Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 5/18/2021

Summer Wetland Delineation











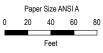
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Date 5/18/2021

Summer Wetland Delineation











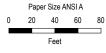
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Date 5/18/2021

Summer Wetland Delineation











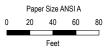
Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 5/18/2021

Summer Wetland Delineation











Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 5/18/2021

Summer Wetland Delineation









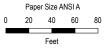
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Winter Wetland Delineation Overview Project No. 11203183 Revision No. -

Date 05/18/2021











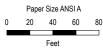
Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 05/18/2021

Winter Wetland Delineation











Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 05/18/2021

Winter Wetland Delineation





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Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



Pierson Company Pierson Consulting As Requested

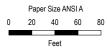
Project No. 11203183 Revision No. -

Date 05/18/2021

Winter Wetland Delineation











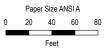
Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 05/18/2021

Winter Wetland Delineation











Pierson Company Pierson Consulting As Requested Project No. 11203183 Revision No. -

Date 05/18/2021

Winter Wetland Delineation









Pierson Company Pierson Consulting As Requested

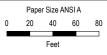
Difference Between Summer and Winter Wetland Delineations

Project No. 11203183 Revision No. -

Date 05/18/2021











Pierson Company Pierson Consulting As Requested

Difference Between Summer and Winter Wetland Delineations

Project No. 11203183 Revision No. -

Date 04/14/2021





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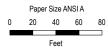
Difference Between Summer and Winter Wetland Delineations

Project No. 11203183 Revision No. -

Date 04/14/2021











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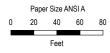
Project No. 11203183 Revision No. -

Date 04/14/2021

Difference Between Summer and Winter Wetland Delineations











Pierson Company Pierson Consulting As Requested

Difference Between Summer and Winter Wetland Delineations

Project No. 11203183 Revision No. -

Date 04/14/2021





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Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet





Pierson Company Pierson Consulting As Requested

Difference Between Summer and Winter Wetland Delineations

Project No. 11203183 Revision No. -

Date 04/14/2021









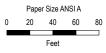
Pierson Company Pierson Consulting As Requested

Revision No. -Date 05/18/2021

Final Wetland Delineation Overview











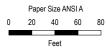
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Date 05/14/2021

Final Wetland Delineation











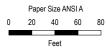
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Date 05/14/2021

Final Wetland Delineation











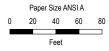
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Date 05/14/2021

Final Wetland Delineation











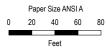
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Date 05/14/2021

Final Wetland Delineation









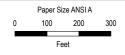


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Date 05/14/2021

Final Wetland Delineation









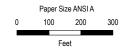
Pierson Company Consulting As-Requested Project No. 11203183 Revision No. -

Date Sept 2020

Soil Map Units

FIGURE 5







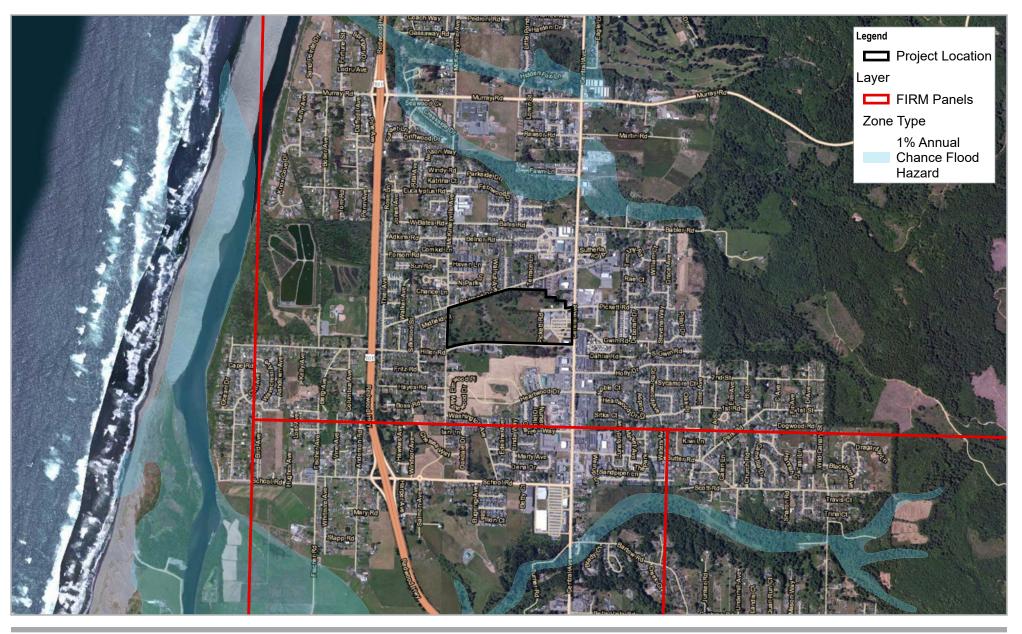


Pierson Company Consulting As-Requested Project No. 11203183 Revision No. -

Date Sept 2020

National Wetland Inventory

FIGURE 6









Pierson Company Consulting As-Requested Project No. 11203183 Revision No. -

Date **Sept 2020**

FEMA Flood Map

FIGURE 7

Appendix B – Data Sheets

Project/site: Pressor	City	County McK	interville Sampling Date: 7/6/20
Applicant/Owner:	Oity.	500mg, <u>1</u>	State: CA Sampling Point: LOTTUE
Investigator(s): Misha Schuser, Hekey Me	nos Henry	tion Township Ra	orge.
Landform (hillstone to the Alexandra Presentation	loo	al relief (conceve	convex, none): CONCAVE Slope (%): ~ 5
Submoine (I DD)	1 =4:	ai relier (concave,	Long: Datum:
			NWI classification:
Soil Map Unit Name:		v- / v-	
Are climatic / hydrologic conditions on the site typical for the		YesV No _	(If no, explain in Remarks.) "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks,)
SUMMARY OF FINDINGS - Attach site map	showing sa	mpling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No V		
Hydric Soil Present? Yes		Is the Sampled	nd? Yes No V
Wetland Hydrology Present? Yes			10 10 10 10 10 10 10 10 10 10 10 10 10 1
Remarks: Upland plot 5ft from w	eHand edo	XC.	
		0	
VECETATION III			
VEGETATION – Use scientific names of pla		minant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	property and the second	ecies? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3.			Species Across All Strata: 2 (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: \)	=1	otal Cover	That Are OBL, FACW, or FAC: 50% (A/B)
1. Rubus usinus	45	Y FACU	Prevalence Index worksheet:
2. Rubus Armomacus			Total % Cover of: Multiply by:
3.			OBL species x1 =
4.			FACW species x 2 =
5.			FAC species x 3 = FACU species x 4 =
	55_=T	otal Cover	UPL species x5 =
Herb Stratum (Plot size: M	-	1001	Column Totals: (A) (B)
1. Raphanus raphinastum		FACU	(b)
2. Leucanthemim vulgare 3. Holcus lanatus	30	Y FAC	Prevalence Index = B/A =
4. Crepis capillaris		FACU	Hydrophytic Vegetation Indicators:
5. Ranunculus repens	~	FAC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6.			3 - Prevalence Index is ≤3.0¹
7.			4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11.			¹Indicators of hydric soil and wetland hydrology must
Manda Vina Stratum / Diot size	48 = TO	otal Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1			Hydrophytic Vegetation /
2	103 = To	alal Caves	Present? Yes No V
% Bare Ground in Herb Stratum	-100-10	Jai Cover	
Remarks: Ones and ares Ormi	anne T	ost D	es not pass FAC-Neutral.
TOES HOT PASS TEATH	marice (2001.130	TOT PESS FACENCUTAL.
			Man I have been been been been been been been be

SOIL	Mc	4 7/16/20 Sampling Po	oint: <u>W17/- V</u>
Profile Description: (Describe to the depti	needed to document the indicator or c	nfirm the absence of indicators.)	
Depth Matrix	Redox Features		J
(inches) Color (moist) %	Color (moist)%Type ¹ L		KS
0-14 1048313 100		- Loam	
¹Type: C=Concentration, D=Depletion, RM=F	Reduced Matrix, CS=Covered or Coated S	nd Grains. ² Location: PL=Pore Linin	g, M=Matrix.
Hydric Soil Indicators: (Applicable to all L		Indicators for Problematic H	
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except ML		
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remark	s)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Olley disease of bourges have a con-	-1-1
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vego wetland hydrology must be	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problem	
Restrictive Layer (if present):			
Туре:			
Depth (inches):	_	Hydric Soil Present? Yes	No X
Remarks:			
HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required:		Secondary Indicators (2 or	
Surface Water (A1)	Water-Stained Leaves (B9) (exce		
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)	
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10	•
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Tab	
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on A	
Drift Deposits (B3)		g Roots (C3) Geomorphic Position (D2)
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)	
Iron Deposits (B5)	Recent Iron Reduction in Tilled Sc	· · · · · · · · · · · · · · · · · · ·	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (I		
Inundation Visible on Aerial Imagery (B7)		Frost-Heave Hummock	is (D7)
Sparsely Vegetated Concave Surface (B	8)		***
Field Observations:	V		
	o Depth (inches):		
	o Y Depth (inches):		- 1
Saturation Present? Yes N	oX Depth (inches):	Wetland Hydrology Present? Yes	No <u>X</u>
(includes capillary fringe)	iltoring well, aerial photos, previous inspec	ons), if available	
i pescine necolucu pata (stredili gauge, moi			
Describe Necolded Data (stream gauge, mor	morning work, dornar priotos, provious mopes		
Remarks:	The state of the s		_
	TOTAL PROCESS, PROVIDES MAPES		

Project/Site: Posson		City/County: MK	in Down De Sampling Date: 7/16/20
Applicant/Owner:			State: A Sampling Point: WITTO
DVestigatoria IA S - Is 14 MA	1/20	Section Township Rar	nge:
andform (hillstone terrare etc.): 51.77/8	4.103.72	Local relief (concave, o	convex, none): COCAVE Slope (%): 42
Submanion // DD).	l at:		Long: Datum:
Soil Map Unit Name:			NWI classification:
We climatic / hydrologic conditions on the site typical for			(If no, explain in Remarks.)
		disturbed? Are "	Normal Circumstances" present? Yes No
re Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
vre Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site ma	ap showing	sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled	Arna
Hydric Soil Present? Yes		within a Wetlan	
Wetland Hydrology Present? Yes			
Remarks: Act 5ft from wetland	edac		
	0		
EGETATION - Use scientific names of pl	ante		
EGETATION - Ose scientific flames of pr	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata:(B)
1			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:	-	_ = Total Cover	That Are OBL, FACW, or FAC:(o(e'lo(A/B)
- Bulous unstrus	5	UDAS Y	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
0.			OBL species x 1 =
· The second second			FACW species x 2 =
			FACURE X3 =
1 2	5	_ = Total Cover	FACU species x4 =
Herb Stratum (Plot size:)	110	V CAC	UPL species x5 =
· Agrostis stalonifera	_ 40	CBL	Column Totals: (A) (B)
Rimex Crisais	8	FAC	Prevalence Index = B/A =
Tafolium repens	- 3	FAC	Hydrophytic Vegetation Indicators:
Plantage major	-6	FAC	1 - Rapid Test for Hydrophytic Vegetation
Holcis Janatus	- 5	FAC	✓ 2 - Dominance Test is >50%
cuperus eradrostis	- u	FACW	3 - Prevalence Index is ≤3.0¹
Ranculus repers	30	YEAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation¹ (Explain)
			¹ Indicators of hydric soil and wetland hydrology must
	104	= Total Cover	be present, unless disturbed or problematic.
oody Vine Stratum (Plot size:)	4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		
•			Hydrophytic
			Vegetation
Bare Ground in Herb Stratum	- 3	= Total Cover	Present? Yes V No
marks: Passes Dominance Test.	, Does	s not pass	> FAC-Neutral.

SOIL						M cu	+/14/2	Sampling Point: 40///
Profile Desc	ription: (Describ	e to the dep	th needed to docur	nent the i	indicator o	r confirm		
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0-3	104 R3/2	100			-		loam	1 Orsanics
3-14	1048312	90	7.54R 1/6	10		m	loom	
J-19	1011310		11-11-110				1007	
						-		
Type: C=C	oncentration D=De	nletion RM	=Reduced Matrix, C5	S=Covere	d or Coated	Sand Gr	ains ² l n	cation: PL=Pore Lining, M=Matrix.
			LRRs, unless other			J OBIIG QI		ors for Problematic Hydric Solls ³ :
Histosol			Sandy Redox (,			m Muck (A10)
	oipedon (A2)		Stripped Matrix					Parent Material (TF2)
	stic (A3)		Loamy Mucky M		1) (except	MLRA 1)		y Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed					er (Explain in Remarks)
	d Below Dark Surfa	ce (A11)	Depleted Matrix		.,			- (
	ark Surface (A12)	,	X Redox Dark Su				³ Indicate	ors of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark					and hydrology must be present,
	Bleyed Matrix (S4)		Redox Depress	ions (F8)				ss disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes X No No
Remarks:							11,741.10 551.	
Remarks.								
HYDROLO	CV						-	
Wetland Hy	drology Indicators	s:						
Primary India	cators (minimum of	one require	d; check all that appl	(v)			Seco_	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (ex	cept	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturation	on (A3)		Salt Crust	(B11)			c	Drainage Patterns (B10)
	larks (B1)		Aquatic In		s (B13)			Dry-Season Water Table (C2)
-	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Visible on Aerial Imagery (C9)
	posits (B3)					ivina Roo		Geomorphic Position (D2) Swale
	at or Crust (B4)		Presence	-				Shallow Aquitard (D3)
Iron Dep			Recent Iro					AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or					Raised Ant Mounds (D6) (LRR A)
	on Visible on Aeria	I Imagent (B) (E IVIC A)		Frost-Heave Hummocks (D7)
	Vegetated Conca			hia:ii iii ixe	illains)		<u> </u>	10st-Heave Hullimocks (D7)
		ve Surface (B0)			-,-		
Field Obser								
Surface Wat	er Present?		No Depth (in	100	7	=		
Water Table	Present?	Yes	No Depth (in	ches):	- Ab			10
Saturation P		Yes	No Depth (in	ches):		_ Wetla	and Hydrolog	y Present? Yes X No
(includes ca	pillary fringe)		- itarian wall ial		aviava l		if available.	
Describe Re	corded Data (Strea	m gauge, m	onitoring well, aerial	pnotas, pr	revious insp	pections), i	ir avallable:	
Remarks:								

	c	ity/County: Mc Ky	olegville sampling Date: 7/16/20
Applicant/Owner:			State: A Sampling Point: WITZUP
Investigator(s): Misha Sharez, helse	McDonalds	ection, Township, Ra	ange:
Landform (hillslope, terrace, etc.): Sarale		ocal relief (concave,	convex, none): CACAVE Slope (%): LS
Subregion (LRR): A	Let:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for	or this time of year		(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site m	ap showing s	sampling point I	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		In the Complete	
Hydric Soil Present? Yes		Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes	_ No/	Within a french	
Remarks: 3ft from wetland edo VEGETATION - Use scientific names of p	lants.		
Tree Stratum (Plot size:)		Dominant Indicator Species? Status	Dominance Test worksheet:
1	2 Processing and the Contract of the Contract		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			
3			Total Number of Dominant Species Across All Strata: (B)
4			
1.4		Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)
Sapling/Shrub Stratum (Plot size: \m²)	0	CNC	Prevalence Index worksheet:
1. Rubio armeniacus		FAC	Total % Cover of: Multiply by:
2. Rubus ursinus	_35_	Y FACU	OBL species
3.			FACW species x2 =
4			FAC species
5.	- US =		FACU species 47 x4= 188
Herb Stratum (Plot size: \m²)	<u>us</u> =	Total Cover	UPL species Ø x5=
1. Holcus langtus	30	Y FAC	Column Totals: 120 (A) 407 (B)
2. Lotus corniculatus	15	Y FAC	Prevalence Index = B/A = 3.392
3. Ranurulus reseas	10	FAC	Hydrophytic Vegetation Indicators:
4. Aarostis stolonifera	10	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Anthoxanthum doratur	5	FACU	✓ 2 - Dominance Test is >50%
6. Crois capillaris	5	FACU	3 - Prevalence Index is ≤3.0¹
7. Plantage lancedata	2	FACU	4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must
	77 =	Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1			Hydrophytic
2,			Vegetation Present? Yes \ No
% Bare Ground in Herb Stratum	170=	Total Cover	Present? Yes V No No
hydrophytic, as shown	by Pre	ralence	Index Does not pass FAC-

SOIL					M	cle	7/16/	<u> </u>		nt: WIT	2-1
Profile Des	cription: (Describe	to the depti	1969		ator or cor	nfirm th	ne absence	of indicate	ers.)		
Depth (inches)	Matrix . Color (moist)	%	Color (moist)	x Features % Type	pe¹ Loc	,2	Texture		Remark	e	
D-10	104 RZ/Z	100	— (moist)			<u> </u>		Siltle		3	
10-16	104 R 5/6	100					Loam	Son		MIKIM	
10-75	704 12 3/13	700							3011	0	7
	Concentration, D=Dep				oated San	nd Grain			Pore Lining.		
-	Indicators: (Applic	able to all L		100					15	dric Soils ³ :	
Histoso	ii (A1) Spipedon (A2)	-	Sandy Redox (Stripped Matrix					n Muck (A1) Parent Mai			
Black H	listic (A3) en Sulfide (A4)	-		Mineral (F1) (ex	cept MLR	A 1)	Ver	y Shallow D	ark Surface n Remarks)		
	ed Below Dark Surfac	e (A11)	Depleted Matrix	18 9			_				
And the second s	Park Surface (A12)	_	Redox Dark Su						hytic veget		
	Mucky Mineral (S1) Gleyed Matrix (S4)	-	Depleted Dark Redox Depress					_	y must be p or problema		
	Layer (if present):		redox bepress	310113 (1 0)					or problems	3(10.	
Type:											lo <u>u</u>
Depth (ir	nches):						Hydric Soil	Present?	Yes	_ No_ <u>/</u>	<u> </u>
IYDROLO	DGY					,,					
Wetland Hy	drology Indicators:					_	-				
Primary Indi	icators (minimum of c	ne required.	check all that appl	(v)			<u>Şecor</u>	ndary Indica	tors (2 or m	ore required	1)
	Water (A1)			ined Leaves (B			v		125	39) (MLRA 1	1, 2,
	ater Table (A2)			1, 2, 4A, and 4i	B)		_	4A, and 4			
	ion (A3) Varks (B1)		Salt Crust		2)			rainage Pat	terns (B10) Water Table	(C2)	
	ent Deposits (B2)		1 920	vertebrates (B1: Sulfide Odor (C				-		ial Imagery ((C9)
	posits (B3)			Rhizospheres al		Roots					(03)
	at or Crust (B4)			of Reduced Iron				hallow Aqui			
Iron De	posits (B5)		Recent Iro	n Reduction in	Tilled Soils	s (C6)		AC-Neutral			
Surface	Soil Cracks (B6)		Stunted or	r Stressed Plant	ts (D1) (LR	RA)	_ R	aised Ant M	lounds (D6)	(LRR A)	
	ion Visible on Aerial I	3-0 00 0		plain in Remarks	s)		— ^F	rost-Heave	Hummocks	(D7)	
	ly Vegetated Concav	Surface (B	B)								
Field Obser		N	o X Depth (in	-h \							
Surface vva Water Table			o Depth (in								
Saturation F			o Depth (in			Vetland	d Hydrolog	y Present?	Yes	_ No ×	
	ecorded Data (stream	gauge, mor	itoring well, aerial	photos, previous	s inspectio	ns), if a	vailable:				
Pomerie:											
Remarks:											

Project/Site: Pleason	Cit	ty/County:	McKir	sampling Date: 7/16/20
Applicant/Owner:				State: CA Sampling Point: WITAW
Investigatories: MA Salar more . In McConst	À Se	ection, Town	nship, Ran	nge:
Landform (hillslope, terrace, etc.): Swale	10	ocal relief (concave, c	convex, none): Concave Slope (%):
Subregion (LRR): A		oudi reliet (Long: Datum:
				NWI classification:
Soil Map Unit Name:				(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time			_ NO _	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology signific				
Are Vegetation, Soil, or Hydrology natura	ally proble	ematic?	(If ne	eded, explain any answers In Remarks.)
SUMMARY OF FINDINGS - Attach site map show	wing s	ampling	point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the	Sampled a Wetlan	Area
Remarks: 5ft from wetland edge				
VEGETATION – Use scientific names of plants.				
Abs	solute D	Dominant I	ndicator	Dominance Test worksheet:
The state of the s	Cover S	Species?		Number of Dominant Species That Are OBL, FACW, or FAC:
2.				Total Number of Dominant
3				Species Across All Strata: (B)
4		Total Cove	er er	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1			-	Total % Cover of: Multiply by:
2			-	OBL species x1 =
3			-	FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
Herb Stratum (Plot size: 1 m2)	=	Total Cove	er	UPL species x 5 =
1. Junious hesperius 20	5	4 6	FACW	Column Totals: (A) (B)
2. Banunculus repens 39	S		-AC	Prevalence Index = B/A =
3. Holcus Ianatus S	5		-AC	Hydrophytic Vegetation Indicators:
4. Cuperus eragrostis L	1	NE	ACW	1 - Rapid Test for Hydrophytic Vegetation
5. Atopewrus geniculatus 20	0_	Y_6	BL	2 - Dominance Test is >50%
6. Agrostis stolonifera 11	0	NE	DA	3 - Prevalence Index is ≤3.0¹
7. Burnex crispus	-	NE	AC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants 1
10				Problematic Hydrophytic Vegetation¹ (Explain)
11,				¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	_=	Total Cove		
1	TILL			Hydrophytic
2				Vegetation /
% Bare Ground in Herb Stratum		Total Cove		Present? Yes V No
Remarks: Passes Dominance Test	. Pa	asses	FAC	- Neutral.

SOIL					M	4 =	7/16/20	Sampling Point <u>U</u>	11TZ-1
Profile Des	cription: (Describe	to the dept				or confirm	the absence of i	ndicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Features	Type	Loc²	Texture	Remarks	
(inches)	104RZ/1	100	Color (moist)	%	Type	Loc	Siltloam		1/ -
2 14			7.5403/1	100				Porgenic me	Her
3-14	104R 2/1	90	7.5483/4	100		m	SiltLorn	*	
				-					
								-	
	Concentration D=Dep					d Sand G		n_PL=Pore Lining, M=Ma	
	Indicators: (Applic	able to all			d.)		Indicators f	or Problematic Hydric Sc	oils³:
Histoso	- 1 · · · · · · · · · · · · · · · · · ·	20	Sandy Redox (\$				2 cm Mi		
	pipedon (A2) listic (A3)	59	Stripped Matrix Loamy Mucky N) (avcant	MIDAT		ent Material (TF2) allow Dark Surface (TF12)	V
_	en Sulfide (A4)		Loamy Gleyed I	And the second second		MILION I)		explain in Remarks)	ļ
	ed Below Dark Surfac	e (A11)	Depleted Matrix					,	
	ark Surface (A12)		Redox Dark Sui					f hydrophytic vegetation a	
(A)	Mucky Mineral (S1)		Depleted Dark S		7)			ydrology must be present	
	Gleyed Matrix (S4) Layer (if present):		Redox Depress	ions (F6)		_	uniess di	sturbed or problematic.	
	Edyor (ii prodotty.								
	nches):						Hydric Soil Pre	sent? Yes 🔨 No	
Remarks:							, , , , , , , , , , , , , , , , , , ,		
HYDROLC	, under 10								
_	drology Indicators:		e de sa maren de						
	icators (minimum of o	one required			(50)			y Indicators (2 or more red	
	e Water (A1) later Table (A2)		Water-Stai	ined Leave 1, 2, 4A, a		xcept)):	r-Stained Leaves (B9) (ML ., and 4B)	.RA 1, 2,
	ion (A3)		Salt Crust		11U 4D)			age Patterns (B10)	
	Лаrks (В1)		Aquatic Inv		(B13)			eason Water Table (C2)	
	ent Deposits (B2)		Hydrogen					ation Visible on Aerial Ima	gery (C9)
-	posits (B3)		Oxidized R			Living Ro		norphic Position (D2) 5 4	
Algal M	at or Crust (B4)		Presence	of Reduced	d Iron (C4	1)		ow Aquitard (D3)	-
	posits (B5)		Recent Iro	n Reductio	n in Tille	d Soils (C	6) 💢 FAC-	Neutral Test (D5)	
	Soil Cracks (B6)		Stunted or			1) (LRR A	· · · · · · · · · · · · · · · · · · ·	d Ant Mounds (D6) (LRR	A)
	ion Visible on Aerial			olain in Rer	marks)		Frost	Heave Hummocks (D7)	
Field Obser	y Vegetated Concav	e Surface (E	38)						
		rac l	No <u> </u>	ahaa\.					
Water Table			No Y Depth (inc						
Saturation F			No Y Depth (inc			— Weti	land Hydrology Pr	esent? Yes N	0
	pillary fringe) ecorded Data (stream								
			•		90 CC 199 G 19	,			
Remarks:	<u>-</u>								

6

Project/Site: Presson			City/County: M.C.	halewile Sampling Date: 7/16/20
Applicant/Owner				State: (A Sampling Point: WaTIUS
Investigator(s): M. Schwarz	K.Mcs	blenoc	Section, Township, R	tange:
Landform (hillslope, terrace, etc.): 50	vale-		Local relief (concave	n, convex, none): Cancare Slope (%): ~5
Subregion (LRR): A		Let:		Long: Datum:
Soil Map Unit Name:				NWI classification:
Are climatic / hydrologic conditions on th			or? Yes V No	(If no, explain in Remarks.)
Are Vegetation, Soil, or I				"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or h				needed, explain any answers in Remarks.)
				locations, transects, important features, etc.
Hydrophytic Vegetation Present?		No	, camping point	
Hydric Soil Present?	Yes	No/	Is the Sample	
Wetland Hydrology Present?	Yes	No/	within a Wetl	and? Yes No V
Remarks:	100.00			
VEGETATION - Use scientific	names of p			
Tree Stratum (Plot size:	-)	Absolute % Cover	Dominant Indicator Species? Status	
1		-		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.				
3		200		Total Number of Dominant Species Across All Strata: (B)
4				Percent of Dominant Species
2 2 22 222 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	-2		_ = Total Cover	That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:		Q	Y FAC	Prevalence Index worksheet:
1. Rubus armeniac				Total % Cover of: Multiply by:
2.				OBL species x 1 =
3 4				FACW species x2 =
5.				FAC species 98 x3 = 294
8. 1 (42)		8	= Total Cover	FACU species x4 =
Herb Stratum (Plot size: 1m²				UPL species x5=
1. Banunculus reper	25	60	Y FAC	Column Totals: 101 (A) 308 (B)
Holous lanatus		_20	Y FAC	Prevalence Index = B/A =3.05
3. Rumex crispus		5_	EAC	Hydrophytic Vegetation Indicators:
L. Vicia Sativa		2_	- UPL	1 - Rapid Test for Hydrophylic Vegetation
Lotus carriculatus		_3_	EAC	2 - Dominance Test is >50%
: Anthoxanthum od			FACL	2 3 - Prevalence Index is ≤3.01
· Festura perennis		2_	FAC	4 - Morphological Adaptations¹ (Provide supporting
				data in Remarks or on a separate sheet)
.				_ 5 - Wetland Non-Vascular Plants¹
0				Problematic Hydrophytic Vegetation¹ (Explain)
1				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)	42	= Total Cover	
				Historyhida
				Vegetation
Rara Ground in Harb Stratum		101	= Total Cover	Present? Yes V No
Bare Ground in Herb Stratum		0		
Off from wet	tand ed	ge. Pa	isses dan	phytic. Does not pass
revolunce index-	-Not s	strongl	y hydrot	Ohytic. Does not pass
FAC- Neutrat To	5+	0)) '	3

SOIL						Mc4	1 7/	16/ Zo Sampling Point: WZTI-U
Profile Des	cription: (Describe	to the depth				r confirm		
Depth	Matrix	%		x Features		Loç²	T	December 1
(inches)	Color (moist)		Color (moist)	%	Type ¹	LOÇ		
0-14	10483/2	100					Loav	<u> </u>
,								
			.,,				-	
								
	oncentration, D=Dep					Sand Gra		Location. PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to all LR	Rs, unless other	rwise note	d.)		Indic	ators for Problematic Hydric Solls ³ :
Histoso		_	Sandy Redox (-				2 cm Muck (A10)
	pipedon (A2)	_	Stripped Matrix	(2)				Red Parent Material (TF2)
	istic (A3)	_	Loamy Mucky Mucky	5 15		MLRA 1)	10	/ery Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed				<u> </u>	Other (Explain in Remarks)
	d Below Dark Surface	e (A11)	_ Depleted Matrix				3,	
	ark Surface (A12)	1	Redox Dark Su		71			cators of hydrophytic vegetation and
	Mucky Mineral (S1) Gleyed Matrix (S4)	_	Depleted Dark Redox Depress)			etland hydrology must be present, nless disturbed or problematic.
	Layer (if present):		_ Redux Depless	10113 (110)			1	ness disturbed of problematic.
			_				United at 6	No. 11 Sec. 11 12 12 12 12 12 12 12 12 12 12 12 12
	ches):						Hyaric S	Soil Present? Yes No
Remarks.								
HYDROLO	OGY							
Wetland Hy	drology Indicators:							
Primary Indi	cators (minimum of o	ne required; c	heck all that appl	y)			Se	condary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leave	s (B9) (ex	cept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		_	1, 2, 4A, ar		•		4A, and 4B)
Saturati			Salt Crust		•			Drainage Patterns (B10)
-	flarks (B1)			vertebrates	(B13)			Dry-Season Water Table (C2)
	nt Deposits (B2)			Sulfide Ode			-	Saturation Visible on Aerial Imagery (C9)
_	posits (B3)			Rhizosphere		iving Root	ts (C3)	Geomorphic Position (D2)
	at or Crust (B4)			of Reduced				Shallow Aquitard (D3)
	posits (B5)			n Reductio) —	FAC-Neutral Test (D5)
	Soil Cracks (B6)			Stressed F				Raised Ant Mounds (D6) (LRR A)
	ion Visible on Aerial I	magery (B7)		plain in Ren		· · · · · · · · · · · · · · · · · · ·		Frost-Heave Hummocks (D7)
	y Vegetated Concave				,			, ,
Field Obser		, , ,						
Surface Wat	ter Present? Y	es No	Depth (in	ches):				
Water Table		es No		ches):				
Saturation P			Depth (in	101			and Hydrol	logy Present? Yes No
	pillary fringe)	C3 14D	Debut (in	GIES)		- **B(IA	ina nyuroi	MO /-
	corded Data (stream	gauge, monit	oring well, aerial	photos, pre	vious insp	ections), i	if available:	
			4					
Remarks:		.,						-
į.								

5

Project/Site: Pierson		City/County: McV	hinlewille sampling Date: 7/16/20
Applicant/Owner			State: Sampling Point: Work
Investigator(s): M. Schuser h. McC	bland	Section, Township, R.	tange:
Landform (hillsigns terress stalt St. 1315		Local relief (concave.	, convex, none): Concave Slope (%): 6201
Subregion // DD): A	l at-		Long: Datum:
			NWI classification:
Soil Map Unit Name:			(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for		year res No.	e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			
Are Vegetetion, Soil, or Hydrology			needed, explain any answers in Remarks.)
- /			locations, transects, important features, etc.
Hydrophylic Vegetation Present? Yes			od Area
Hydric Soil Present? Yes/	_ No		
	_ No	-	
Remarks:			
VEGETATION – Use scientific names of p	olants.		
	Absolut	e Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		er Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2.			Total Number of Dominant
3.			Species Across All Strata: (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	-	= Total Cover	That Are OBL, FACW, or FAC: 100% (A/B)
1		W	Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5.			FACIl species x3 =
11.10		_ = Total Cover	FACU species x 4 = UPL species x 5 =
Herb Stratum (Plot size: Im²) 1. Ranon culus rocas	20	Y FAC	
2. Holcus lanatus	10	FAC	
3. Agrostis stolonifera	6	FAC	Prevalence Index = B/A =
4. Veronica americana	2	ORL	Hydrophytic Vegetation Indicators:
5. Geranium dissection		UPL	- 1 - Rapid Test for Hydrophytic Vegetation
6. Alopecurus acniculatus	4	OBL	2 - Dominance Test is >50%
7. Rumex crispus		CAC	- 3 - Prevalence Index is ≤3.0¹
8			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11.			Indicators of hydric soil and wetland hydrology must
Mondy Vino Stotum (Blat sings	100	_= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:) 1			
			Hydrophytic
2		- Total A	Vegetation Present? Yes No
% Bare Ground in Herb Stratum		_= Total Cover	10
Remarks: 8ft from wetland edg	0	THE CACA	Santral Description
Ti How werland edg	R. Pa	2262 FHC-4	Jeutral, Passes Dominance
(est.			
Test.			,

Profile Desc	cription: (Describ	e to the de	oth needed to docum	ent the i	ndicator	or confirm	the absence	70 Sampling Point: W27
Depth	Matrix			Features				•
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	<u>Texture</u>	Remarks
0-13	10982/1	95	7.54R3/4	5	C	M	Loan	
-	÷							
				-				
Type: C=C	oncentration, D=De	pletion, RM	l=Reduced Matrix, CS	=Covered	or Coate	ed Sand Gra	ains. ² Loc	ation. PL=Pore Lining, M=Matrix.
			LRRs, unless other			-		rs for Problematic Hydric Soils ³ :
_ Histosol	(A1)		Sandy Redox (S	55)			2 cm	Muck (A10)
	pipedon (A2)		Stripped Matrix	6 6				Parent Material (TF2)
	istic (A3)		Loamy Mucky M			MLRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)	(011)	Loamy Gleyed N)		Othe	er (Explain in Remarks)
	d Below Dark Surfa ark Surface (A12)	ice (ATT)	Depleted Matrix Redox Dark Sur				3Indicato	rs of hydrophytic vegetation and
	Aucky Mineral (S1)		Depleted Dark S	(3)	7)			nd hydrology must be present.
_	Gleyed Matrix (S4)		Redox Depress	-	,			s disturbed or problematic.
				0110 (1 0)			utiles	s disturbed of problematic.
	Layer (if present):			0113 (1 0)			unies:	s disturbed of problematic.
estrictive				0110 (1 0)			unies	s disturbed of problematic.
Restrictive Type:	Layer (if present):			0113 (1 0)				Present? Yes No
Restrictive Type:	Layer (if present):			0113 (1 0)				
Restrictive I Type: Depth (in	Layer (if present):							
Restrictive I Type: Depth (in	Layer (if present):							
Type: Depth (in	Layer (if present):							
testrictive (Type: Depth (in temarks:	Layer (if present):							
Type:	Layer (if present):							
Type:	Layer (if present): ches): GY drology Indicators	5:					Hydric Soil	Present? Yes <u>~</u> No
Type: Depth (in lemarks: /DROLO Vetland Hyvirimary India	ches): GY drology Indicators cators (minimum of	5:	ed, check all that apply	<i>t</i>)			Hydric Soil	Present? Yes No
estrictive Type: Depth (in emarks: /DROLO /etland Hy rimary India Surface	ches): GY drology Indicators cators (minimum of	5:	ed, check all that apply	v) ned Leave		xcept	Hydric Soil	Present? Yes No No No Mary Indicators (2 or more required later-Stained Leaves (B9) (MLRA 1
estrictive Type: Depth (in emarks: /DROLO /etland Hy rimary India _ Surface _ High Wa	Ches):	5:	ed, check all that apply Water-Stai	ned Leave		xcept	Hydric Soil Secon W	Present? Yes No
Type:	Layer (if present): ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	5:	ed, check all that apply Water-Stai MLRA	ned Leave 1, 2, 4A , a (B11)	nd 4B)	xcept	Hydric Soil Secon W	Present? Yes No
PERFORMENT OF THE PROPERTY OF	Ches): Ches):	5:	ed, check all that apply — Water-Stai MLRA — Salt Crust — Aquatic Inv	ned Leave	nd 4B) s (B13)	xcept	Hydric Soil Secon W Di	Present? Yes No
Type:	ches): ches): dGY drology Indicators cators (minimum of Water (A1) eter Table (A2) on (A3) farks (B1) nt Deposits (B2)	5:	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Oc	nd 4B) s (B13) dor (C1)		Hydric Soil Secon W Di S S	Present? Yes No
Property of the control of the contr	ches): dGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	5:	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizosphei	nd 4B) s (B13) dor (C1) res along	Living Roo	Hydric Soil Secon W Di Sis (C3) G G G G G G G G G G G G G	Present? Yes No
rype:	ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	5:	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence of	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizosphei	s (B13) for (C1) res along d Iron (C4	Living Roo	Hydric Soil Secon W D Sis (C3) G Sis (C3)	Present? Yes No
rype:	ches): ches): dry drology Indicators cators (minimum of water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	5:	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizosphei of Reduce	s (B13) for (C1) res along d Iron (C4 on in Tille	Living Roo 4) d Soils (C6	Hydric Soil	Present? Yes No
Type:	ches): ches): ches): drology Indicators cators (minimum of water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	s: one require	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizospher of Reduce of Reduce of Stressed	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo 4) d Soils (C6	Hydric Soil	Present? Yes No
rype:	ches): ches): ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) ion Visible on Aeria	s: fone require	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c Recent Iros Stunted or Other (Exp	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizospher of Reduce of Reduce of Stressed	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo 4) d Soils (C6	Hydric Soil	Present? Yes No
Prince of the second of the se	ches): ches): dGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) cosits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca	s: fone require	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c Recent Iros Stunted or Other (Exp	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizospher of Reduce of Reduce of Stressed	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D	Living Roo 4) d Soils (C6	Hydric Soil	Present? Yes No
POROLO Vetland Hy rimary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely ield Obser	ches): ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca	s: one require	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Stunted or 37) Other (Exp	ned Leave I, 2, 4A , a (B11) rertebrate: Sulfide Od hizosphei of Reduce of Reduce of Reduce of Reduce of Reduce of Reduce	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A)	Hydric Soil	Present? Yes No
Princtive Depth (inclemarks: POROLO Vetland Hydrimary India Surface High Water M Sedimer Drift Depth Algal Mater M Iron Depth Surface Inundati Sparsely ield Observiorface Water Water Water M Surface	ches): ches): ches): ches): drology Indicators cators (minimum of water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeria y Vegetated Conca vations: eer Present?	s: fone require I Imagery (E ve Surface	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Stunted or 37) Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate: Sulfide Od hizosphei of Reduce n Reduction Stressed lain in Res	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A)	Hydric Soil	Present? Yes No
YDROLO Vetland Hy Surface High Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser	ches): ches): ches): dGY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Aeria y Vegetated Conca vations: arer Present? Present?	s: fone require	ed, check all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Stunted or 37) Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate: Sulfide Ochizospher of Reduce n Reduction Stressed Iain in Receives	s (B13) for (C1) res along d Iron (C4) on in Tiller Plants (D marks)	Living Roo 4) d Soils (C6 1) (LRR A)	Hydric Soil	Present? Yes No

Remarks:

Project/Site: Presson		City/County: McKi	oleville sampling Date: 7/16/20
Applicant/Owner:			State: CA Sampling Point: 101
Investigator(s): M. Schwarz, K. Mc			
Landform (hillslope, terrace, etc.): Swale		Local relief (concave, o	convex, none): _Concave Slope (%):
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Unit Name:	-		NWI classification:
Are climatic / hydrologic conditions on the site typical fo	r this time of ye	ear? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pr	oblematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site ma	ap showing	sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No V		
Hydric Soil Present? Yes		Is the Sampled	Area
Wetland Hydrology Present? Yes	No_		nd? Yes No
Remarks: Point in center of	ditria	to determi	ine if wetland Annears
to be well-drained san	1. Jan	-	TE IT WETTATO, Appears
	-	(°).	
EGETATION – Use scientific names of p	10 - 10 No 10 10 2		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1	The same of the sa	A CONTRACTOR OF THE PARTY OF TH	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2.			Total Number of Dominant
3			Species Across All Strata: (B)
1.			Percent of Dominant Species
		_ = Total Cover	That Are OBL, FACW, or FAC: 50% (A/B)
Sapling/Shrub Stratum (Plot size: __) 1. RUBUS UCCIOUS	5	Y FACU	Prevalence Index worksheet:
		FROO	Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
	5	= Total Cover	FACU species x 4 =
lerb Stratum (Plot size: 1 m2	70	V can	UPL species x5 =
. Lotus carniculatus	10		Column Totals: (A) (B)
Agristis stoleniters	_10	FAC	Prevalence Index = B/A =
Festira perennis	-12	-AC	Hydrophytic Vegetation Indicators:
Rimex Erispus		CAC	1 - Rapid Test for Hydrophytic Vegetation
Holcus lanatus		- FIC	2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation¹ (Explain)
)			Indicators of hydric soil and wetland hydrology must
	701	= Total Cover	be present, unless disturbed or problematic.
oody Vine Stratum (Plot size:)	100	= Total Cover	
			Hydrophytic
			Vegetation
Bare Ground in Herb Stratum	108	= Total Cover	Present? Yes No

n the absence of indicators.)

th <u>Matrix</u> nes) <u>Color (moist)</u>	%	Color (r	nolst)	%	Type'	Loc2	Texture		Rei	marks	
9" 10V103h	100			-			LOW	\			
14" LOYR LIVE	00	CVOI	Me	10		IAA	10001	100			
19 10XX ANG	2 25	ZYN	116	15		TAZ	Damy:	D VIC			
											_
pe: C=Concentration, D=E	epletion, RM	l=Reduced I	Matrix, CS	S=Covered	or Coate	d Sand G			PL=Pore Li		
dric Soil Indicators: (App							Indica	ators for	Problematic	Hydric So	oils³:
Histosol (A1)			Redox (2	cm Muck	(A10)		
Histic Epipedon (A2)			ed Matrix				_ R	ed Paren	t Material (T	F2)	
Black Histic (A3)				Mineral (F1) (except	MLRA 1			w Dark Sur		
Hydrogen Sulfide (A4)				Matrix (F2			_ 0	ther (Exp	lain in Rema	rks)	
Depleted Below Dark Sur		Deple	ted Matrix	k (F3)							
Thick Dark Surface (A12)				rface (F6)					drophytic ve		
Sandy Mucky Mineral (S1	•	-		Surface (F	7)				ology must		
Sandy Gleyed Matrix (S4		Redo	x Depress	sions (F8)			unl	ess distur	bed or prob	ematic.	
strictive Layer (if present):										
Type:									AD V		4.
Depth (inches):emarks:							Hydric Sc	il Preser	t? Yes_	No	
Depth (inches):emarks:	ors:						Hydric Sc	il Preser	ttr fes_	No	
Depth (inches):emarks: **TOROLOGY** /etland Hydrology Indicate		red; check al	I that app	(v)							
Depth (inches):emarks: DROLOGY Vetland Hydrology Indicatorimary Indicators (minimum					es (B9) (e)	ccept	Sec	ondary In	dicators (2 o	r more requ	nired)
Depth (inches):emarks: DROLOGY Vetland Hydrology Indicate rimary Indicators (minimum Surface Water (A1)			Water-Sta	ined Leave		cept	Sec	ondary In Water-St	dicators (2 o	r more requ	nired)
Depth (inches):emarks: DROLOGY Vetland Hydrology Indicatorimary Indicators (minimum Surface Water (A1) High Water Table (A2)			Water-Sta	ined Leave 1, 2, 4A, a		ccept	Sec	ondary In Water-St 4A, as	dicators (2 o ained Leave	r more requ s (B9) (MLF	nired)
Depth (inches):emarks: DROLOGY Vetland Hydrology Indicate rimary Indicators (minimum Surface Water (A1)			Water-Sta MLRA Salt Crust	ined Leave 1, 2, 4A, a (B11)	nd 4B)	ccept	Sec	ondary In Water-St 4A, ar Drainage	dicators (2 o ained Leave nd 4B) Patterns (B'	r more requ s (B9) (MLR	nired)
Depth (inches):emarks: **TDROLOGY **Tetland Hydrology Indicater			Water-Sta MLRA Salt Crust Aquatic In	ined Leave 1, 2, 4A, a	and 4B) s (B13)	cept	Sec	ondary In Water-St 4A, a Drainage Dry-Seas	dicators (2 o ained Leave nd 4B) Patterns (B' on Water Ta	r more requis (B9) (MLF	ired)
Depth (inches):emarks: **TDROLOGY** /*TOROLOGY** /*TOROLOGY* /*TOROLOGY** /*		- '	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leave 1, 2, 4A, a (B11) vertebrates	s (B13) dor (C1)		Sec —	ondary In Water-St 4A, ar Drainage Dry-Seas Saturatio	dicators (2 o ained Leave: nd 4B) Patterns (B' on Water Ta	r more requis (B9) (MLF	ired)
Depth (inches):emarks: DROLOGY Vetland Hydrology Indicate rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)			Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	1, 2, 4A, a (B11) vertebrates Sulfide Oc	s (B13) for (C1) res along L	Living Roo	Sec	ondary In Water-St 4A, as Drainage Dry-Seas Saturation Geomorp	dicators (2 o ained Leave nd 4B) Patterns (B' on Water Ta n Visible on A hic Position	r more requises (B9) (MLF	ired)
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicate rimary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5)	of one requir		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizosphei	s (B13) dor (C1) res along L d Iron (C4	Living Roo	Sec	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A	dicators (2 o ained Leave: nd 4B) Patterns (B' on Water Ta	r more requise (B9) (MLF	ired)
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicate rimary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Surface Soil Cracks (B6)	of one requir		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizosphei of Reduce	s (B13) dor (C1) res along I d Iron (C4) on in Tilled	Living Roo) I Soils (C6	Sec	ondary In Water-St 4A, ar Drainage Dry-Seas Saturatio Geomorp Shallow A	dicators (2 o ained Leave ad 4B) Patterns (B' on Water Ta n Visible on A hic Position Aquitard (D3)	r more request (B9) (MLF) (10) ble (C2) Aerial Image (D2)	MA 1,
Print Deposits (B2) Depth (inches):emarks: Proposite (B4) Iron Deposits (B5) Surface Soil Cracks (B6 Inundation Visible on As	of one requir	— · · · · · · · · · · · · · · · · · · ·	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	Living Roo) I Soils (C6	Sec	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A	dicators (2 o ained Leaves nd 4B) Patterns (B' on Water Tan Visible on A hic Position equitard (D3) tral Test (D5	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Permarks: Parmarks: Parmary Indicators (minimum of minimum of mi	of one requir	— · · · · · · · · · · · · · · · · · · ·	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or	nined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1	Living Roo) I Soils (C6	Sec	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 and Mounds (D5)	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Property (inches):	of one requir) rial Imagery (cave Surface	(B7) (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Ex	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) for (C1) res along t d Iron (C4) on in Tilled Plants (D1) marks)	Living Roo) I Soils (C6	Sec	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 and Mounds (D5)	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Property (inches):	of one requir	(B7) - (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Ex	nined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed	s (B13) for (C1) res along t d Iron (C4) on in Tilled Plants (D1) marks)	Living Roo) I Soils (C6	Sec ————————————————————————————————————	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 and Mounds (D5)	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Property (inches):	of one requir) rial Imagery (cave Surface	(B7) (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted or Other (Ex	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	Living Roo) I Soils (C6 I) (LRR A	Sec ————————————————————————————————————	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised A	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 and Mounds (D5)	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Depth (inches):emarks: PROLOGY Vetland Hydrology Indicate imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Surface Soil Cracks (B6 _ Inundation Visible on As _ Sparsely Vegetated Corfield Observations: Surface Water Present? Water Table Present? Saturation Present?	of one requir in imagery (cave Surface Yes	(B7) - (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Research	s (B13) dor (C1) res along L d Iron (C4 on in Tilled Plants (D1 marks)	Living Roc) I Soils (C6 I) (LRR A	Sec ————————————————————————————————————	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised Al Frost-Hea	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 at Mounds (Dave Hummoc	r more requestions (B9) (MLF) 10) ble (C2) Aerial Image (D2) 1) 106) (LRR A)	MA 1,
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicate imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Surface Soil Cracks (B6 _ Inundation Visible on As _ Sparsely Vegetated Corfield Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	of one requir rial Imagery (cave Surface Yes Yes Yes	(B7) (B8) No 1	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Researches): aches):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	Living Roo) I Soils (C6 I) (LRR A	ots (C3)	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised Al Frost-Hea	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 at Mounds (Dave Hummoc	r more request (B9) (MLF) (10) ble (C2) Aerial Image (D2) (D2) (D6) (LRR A)	MA 1,
Property (inches):	of one requir rial Imagery (cave Surface Yes Yes Yes	(B7) (B8) No 1	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Researches): aches):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	Living Roo) I Soils (C6 I) (LRR A	ots (C3)	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised Al Frost-Hea	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 at Mounds (Dave Hummoc	r more request (B9) (MLF) (10) ble (C2) Aerial Image (D2) (D2) (D6) (LRR A)	MA 1,
Depth (inches):emarks: POROLOGY Vetland Hydrology Indicate imary Indicators (minimum _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Surface Soil Cracks (B6 _ Inundation Visible on As _ Sparsely Vegetated Corfield Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	of one requir rial Imagery (cave Surface Yes Yes Yes	(B7) (B8) No 1	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Researches): aches):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	Living Roo) I Soils (C6 I) (LRR A	ots (C3)	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised Al Frost-Hea	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 at Mounds (Dave Hummoc	r more request (B9) (MLF) (10) ble (C2) Aerial Image (D2) (D2) (D6) (LRR A)	MA 1,
Property (inches):	of one requir rial Imagery (cave Surface Yes Yes Yes	(B7) (B8) No 1	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized If Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrates Sulfide Oc Rhizospher of Reduce on Reduction r Stressed plain in Researches): aches):	s (B13) dor (C1) res along L d Iron (C4) on in Tilled Plants (D1 marks)	Living Roo) I Soils (C6 I) (LRR A	ots (C3)	ondary In Water-St 4A, ar Drainage Dry-Seas Saturation Geomorp Shallow A FAC-Neu Raised Al Frost-Hea	dicators (2 of ained Leaves and 4B) Patterns (Broon Water Tan Visible on Adultard (D3) tral Test (D5 at Mounds (Dave Hummoc	r more request (B9) (MLF) (10) ble (C2) Aerial Image (D2) (D2) (D6) (LRR A)	MA 1,

WEILAND DETERMINATION L			
Project/Site: Vusson		City/County: VIChi	State: Sampling Point: Up2
Applicant/Owner:	. 1		State: Sampling Point: Op 2
Investigator(s): M. Schwarz, K. McD	mald	Section, Township, Ra	nge:
Landform (hillslope, terrace, etc.):		Local relief (concave,	convex, none): Concave Slope (%): 12
Subregion (LRR): A	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for	this time of ye	ar? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	_ significantly	disturbed? Are *	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		
Hydric Soil Present? Yes	No V	Is the Sampled	nd? Yes No
Wetland Hydrology Present? Yes			101
Remarks: Point upstream in ditch	~ from	Up1	
VECTATION III			
VEGETATION – Use scientific names of pla			
Tree Stratum (Plot size: 13/m cadio)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1. Alnus rubra		FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Pinus valiata	35	YUPL	
3. Seguoia semperuliens	20	Y UPL	Total Number of Dominant Species Across All Strata: (B)
4.			
1.2	63	_= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:	ne	V and	Prevalence Index worksheet:
1. Rulaus ursinus		Y FACU	Total % Cover of: Multiply by:
2. Lonicera involucrata	يسورون والمستأدات	FAC	OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5.	- 40	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m2			UPL species x 5 =
1. Holius lamatus	2	Y FAC	Column Totals: (A) (B)
2. Ceucanthemm vulgare	2	Y FACU	
3. Hypochaecis radicata		FACU	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4.			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3,01
7			4 - Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must
	5	= Total Cover	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:)			
1			Hydrophytic
2.			Vegetation Present? Yes No
% Bare Ground in Herb Stratum 95%	-	= Total Cover	resNov
Remarks:			
Remarks: Does not pass Dom	IN 3V	ce Test.	Does not pass
FAC-neutral test.			

Sampling Point: Up 2

Depth Matrix		Redox	Features	,		
inches) Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture Remarks
3-9" 10YR3/4	100		-	-	-	Sandyloan
1-13" 10YR 5/6	90	54R414	10	C	M	loany sand
·						
•						
Type: C=Concentration, D=De					d Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (Appl	icable to all	LRRs, unless other	wise note	ed.)		Indicators for Problematic Hydric Soils ³ :
_ Histosol (A1)		Sandy Redox (S	0			2 cm Muck (A10)
Histic Epipedon (A2) Black Histic (A3)		Stripped Matrix		1/	MI DA 41	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Mucky M			MLKA 1)	Other (Explain in Remarks)
Depleted Below Dark Surfa	ace (A11)	Loamy Gleyed Matrix				Outer (Explain in Nothans)
_ Thick Dark Surface (A12)	230 (F(11)	Redox Dark Sur	(2) (A)			³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		Depleted Dark S	17 19	7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depressi		5.60		unless disturbed or problematic.
Restrictive Layer (if present)		10000	100.00			
Type:						/
Depth (inches):						Hydric Soil Present? Yes No
YDROLOGY						
National Hydrology Indicator	·e·					
Netland Hydrology Indicator		d: check all that anniv	٨			Special and instance (2 or more required)
Primary Indicators (minimum o				ne (PO) (n		Secondary Indicators (2 or more required)
Primary Indicators (minimum o Surface Water (A1)		Water-Stail	ned Leave		xcept	Water-Stained Leaves (B9) (MLRA 1, 2
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2)		Water-Stair	ned Leave 1, 2, 4A, a		xcept	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stair MLRA 1 Salt Crust (ned Leave 1, 2, 4A, a (B11)	nd 4B)	xcept	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)		Water-Stail MLRA 1 Salt Crust (Aquatic Inv	ned Leave 1, 2, 4A, a (B11) rertebrates	nd 4B) s (B13)	xcept	 Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)		Water-Stail MLRA 1 Salt Crust (Aquatic Inv	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od	nd 4B) s (B13) or (C1)		Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher	or (C1) es along	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) dts (C3) Geomorphic Position (D2)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reducer	nd 4B) s (B13) or (C1) es along d Iron (C4	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) ds (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Primary Indicators (minimum o Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduced n Reduction	or (C1) es along firon (C4) in in Tilled	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	f one require	Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence co Recent Iron Stunted or	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduced Reduction Stressed	or (C1) es along d Iron (C4) on in Tilled	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ets (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	f one require	Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduced Reduction Stressed	or (C1) es along d Iron (C4) on in Tilled	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria	f one require	Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduced Reduction Stressed	or (C1) es along d Iron (C4) on in Tilled	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (CS) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial	f one require	Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduced Reduction Stressed Jain in Red	or (C1) es along d Iron (C4) on in Tilled	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ets (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca	f one require al Imagery (B ave Surface (Water-Stain MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp B8) Depth (inc	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od hizospher of Reduced Reduction Stressed lain in Rea	or (C1) es along d Iron (C4 on in Tilled Plants (D	Living Roo	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 dis (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Primary Indicators (minimum or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Concated	f one require al Imagery (B ave Surface (Yes Yes Yes	Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (inc	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduce n Reductio Stressed lain in Rer thes):	or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 of (C3)) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary Indicators (minimum or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Concastication Surface Water Present? Water Table Present?	f one require al Imagery (B ave Surface (Yes Yes Yes	Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (inc	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reduce n Reductio Stressed lain in Rer thes):	or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	Living Roo i) d Soils (C6 1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? Includes capillary fringe) Describe Recorded Data (streat	f one require al Imagery (B ave Surface (Yes Yes Yes am gauge, ma	Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (inc	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reducet n Reductio Stressed lain in Rer thes): hes):	or (C1) es along d Iron (C4 on in Tiller Plants (D marks)	Living Roo I) I Soils (C6 I) (LRR A) Wetla pections), i	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 ats (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Primary Indicators (minimum or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Concated	f one require al Imagery (B ave Surface (Yes Yes Yes am gauge, ma	Water-Stail MLRA Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (inc	ned Leave 1, 2, 4A, a (B11) rertebrates Sulfide Od hizospher of Reducet n Reductio Stressed lain in Rer thes): hes):	or (C1) es along d Iron (C4 on in Tiller Plants (D marks)	Living Roo I) I Soils (C6 I) (LRR A) Wetla pections), i	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 of (C3)) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

Project/Site: Pusson			City/County: MCh	State: A Sampling Point: W3TIU
Applicant/Owner:		11		State: Sampling Point: WS 110
Investigator(s): M. Schusch	C. H.MCD	bland	Section, Township, Ra	nge:
Landform (hillslope, terrace, etc.): _d	epressid	٦		convex, none): CON CAIR Slope (%): 2
Subregion (LRR): A	,	Let:		Long: Datum:
Soil Map Unit Name:				NWI classification:
Are climatic / hydrologic conditions on	the site typical for	r this time of ye	er? Yes V No_	(If no, explain in Remarks.)
Are Vegetation, Soil, o				"Normal Circumstances" present? Yes V No
Are Vegetation, Soil, o				eeded, explain any answers in Remarks.)
				ocations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes V	No		
Hydric Soil Present?	Yes		Is the Sampled	
Wetland Hydrology Present?	Yes		within a Wetlar	nd? Yes No
EGETATION – Use scientific	c names of p	lants.		
Tree Stratum (Plot size: 3 my a	dias	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1. Malús fosca		35	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Alnus rubra		20	V FAC	
3. Siquoia semper	vice O.S		1/91	Total Number of Dominant Species Across All Strata: (B)
1.				Species Across All Strata. (6)
		56	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (GC). (A/B)
Sapling/Shrub Stratum (Plot size:		1.	11 01-	Prevalence Index worksheet:
Lanicora involve	rata	_15_	Y FAC	Total % Cover of: Multiply by:
Bubus ursinus		- 12	A EVCO	OBL species x1 =
Bubus armeniaci		_5_	FAC	FACW species 36 x2= 72
-				FAC species 95 x3 = 285
•		76		FACU species 35 x4= 140
lerb Stratum (Plot size: 1m2)	21	= Total Cover	UPL species 2 x5= 20
Gallum apartne		20	Y FACU	Column Totals: 168 (A) 517 (B)
Holcuslanatus		35	Y FAC	
Festura perennis		5	FAC	Prevalence Index = B/A =
Ranunculus reper	25	15	EAC	1 - Rapid Test for Hydrophytic Vegetation
Sonchusoleracou	2		UPL	2 - Dominance Test is >50%
Stachysrigida			- EACW	☑ 3 - Prevalence Index is ≤3.0¹
3 3				4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
				5 - Wetland Non-Vascular Plants¹
				Problematic Hydrophytic Vegetation¹ (Explain)
			Table D.	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
oody Vine Stratum (Plot size:)		= Total Cover	- Processing
				Undendrate
				Hydrophytic Vegetation /
Bare Ground in Herb Stratum	1.		= Total Cover	Present? Yes V No
Prevalence Ind FAC-Neutral T	etlanded lex-Not lest.	ge. P	asses Dani	mance Test, but not phytic. Does not pass

SOIL	M c U depth needed to document the indicator or confirm	7/16/20 Sampling Point: W37/-
	Redox Features	the absence of mulcators.)
Depth Matrix (inches) Color (moist) %	Color (moist) % Type Loc²	Texture Remarks
	00	Loam/5:11 Loam-low chroma
		Lode
6-14 104R3/2 10	0	
		2
Type: C=Concentration, D=Depletion, Hydric Soil Indicators: (Applicable to	RM=Reduced Matrix, CS=Covered or Coated Sand Gr	rains. ² Location: PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils ³ :
		2 cm Muck (A10)
Histosol (A1) Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No Y
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:		· · · · · · · · · · · · · · · · · · ·
Primary Indicators (minimum of one rec	puired: check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living Roo	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (C6	
Surface Soil Cracks (B6)	Stunted or Stressed Plants (D1) (LRR A	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Image		Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surfa	ace (B8)	
Sparsely Vegetated Concave Surfa Field Observations:	ace (B8)	

Remarks:

Yes No Y Depth (inches):

Yes _____ No _____ Depth (inches): ______

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available

Water Table Present?

Saturation Present? (includes capillary fringe) Wetland Hydrology Present? Yes ____ No 🔀

Project/Site: PLEASON	City/	County: Mc Ku	olegville Sampling Date: 7/16/2
Applicant/Owner:			State: CA Sampling Point: W311
Investigator(s): M. Schwarz, K. McCor Landform (hillslope, terrace, etc.): depression Subregion (LRR): A	Loc	al relief (concave, c	nge:
			NWI classification:
Soil Map Unit Name:	the Hear of word	1	(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for the Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site map	significantly distunction	orbed? Are "I	Normal Circumstances" present? Yes No eded, explain any answers in Remarks.)
Hydric Soil Present? Yes	No No	Is the Sampled within a Wetlan	
Remarks:	NO		
VEGETATION – Use scientific names of pla	nts.		
Tree Stratum (Plot size:) 1	% Cover Sp		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size: \\n^2\)		otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/E
1. Rubusursinus 2. Lonicera involucrata	-5-	Y FACU	Prevalence Index worksheet:
3 4			OBL species x 1 = FACW species x 2 =
5			FAC species x 3 =
Herb Stratum (Plot size: \m²)	=Te	otal Cover	FACU species x 4 = UPL species x 5 =
1. Poa pratensis 2. Ranunculus repens	15	YEAC	Column Totals: (A) (B)
3. Alopecurus geniculatus	18	Y FAC V ORL	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Runex conglemeratus	10_	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Galiuntafldum 6. Lotus corniculatus	10	FACU	2 - Dominance Test is >50%
· Veranica swtellacia		OBL	3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supportin
2. Agrastis stolonifor 2. Cuperus eragrafis	- FO -	- EAC	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹
10. Stachijs riaida	3	FACW	Problematic Hydrophytic Vegetation¹ (Explain)
11.	98 = To	tal Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
2.			Hydrophytic Vegetation /
% Bare Ground in Herb Stratum		tal Cover	Present? Yes V No
FAC-Neutral	dge. P	asses Dan	ninance Test, Passes

Profile Desci	ription: (Describe	to the der	oth needed to docume	ent the i	ndicator	or confirm	n the absence of	indicators.)
Depth	Matrix			Features				e consideration of the conside
inches)	Color (moist)	%	Color (maist)	%		Loc ²	Texture	Remarks
2-3	10487/1	100					Loam	
-14	104 R'2/1	90	7.54R3/4	10	L	m	Loam	
			=Reduced Matrix, CS=			d Sand G		ion: PL=Pore Lining, M=Matrix.
-	5 5 5	abie to all	LRRs, unless otherw		d.)			for Problematic Hydric Soils ³ :
Black His Hydroger	ipedon (A2)	e (A11)	Sandy Redox (Stripped Matrix (Stripped M	S6) ineral (F1 latrix (F2)		MLRA 1)	Red Pa	Muck (A10) arent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks)
Thick Da	irk Surface (A12) lucky Mineral (S1)	- (,	Redox Dark Surf	ace (F6)	7)			of hydrophytic vegetation and hydrology must be present.
			Redox Depression		• /			disturbed or problematic.
	leyed Matrix (S4)		redox Depressio) (1 U)			diness (disturbed of problematic.
Restrictive L Type:	ayer (if present):						Hydric Soil Pr	
Type: Depth (inc	ayer (if present):			, , , , , , , , , , , , , , , , , , ,				
Restrictive L Type: Depth (inc	ayer (if present):			, , , , , , , , , , , , , , , , , , ,				
Type: Depth (incommerks: YDROLOG	ayer (if present): thes): GY drology Indicators:						Hydric Soil Pr	resent? Yes <u>V</u> No
Type: Depth (includent includent include	ayer (if present): thes): GY drology Indicators:		d; check all that apply) — Water-Stain) ned Leave		xcept	Hydric Soil Pr	resent? Yes <u>V</u> No
Type: Depth (included line) YDROLOG Vetland Hyde Indication Surface Version High Water	GY drology Indicators: eators (minimum of o		d; check all that apply) Water-Stain MLRA 1,	ed Leave		xcept	Hydric Soil Pr	resent? Yes
YDROLOG Vetland Hyd Surface V High Wat Saturatio	GY drology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (F) led Leave , 2, 4A, a B11)	nd 4B)	xcept	Hydric Soil Pr Seconds Wat Drai	ary Indicators (2 or more required ter-Stained Leaves (B9) (MLRA 1 A, and 4B) inage Patterns (B10)
YDROLOG Surface V High Wat Saturatio Water Ma	GY drology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (I	ed Leave , 2, 4A, a B11) ertebrates	nd 4B) s (B13)	xcept	Hydric Soil Programme Seconds Wat Drain Dry-	resent? Yes
YDROLOG Vetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma	GY drology Indicators: cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (F	ed Leave , 2, 4A, a B11) ertebrates	nd 4B) s (B13) lor (C1)		Hydric Soil Property Seconds Wat Draid Dry Satu	resent? Yes V No
PROLOCUTION OF THE PROPERTY OF	GY trology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) tosits (B3)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve	ed Leave , 2 , 4A , a B11) ertebrates sulfide Od	nd 4B) s (B13) for (C1) res along	Living Roc	Seconda — Wat — Drai — Dry- ots (C3) — Geo	resent? Yes No
PROLOCUTE Surface Volume 1 Surface Volume 1 Surface Volume 1 Surface Volume 1 Sediment 1	GY trology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) tosits (B3) tt or Crust (B4)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh	ed Leave , 2, 4A, a B11) ertebrates sulfide Od nizospher f Reduce	nd 4B) s (B13) dor (C1) res along d fron (C4	Living Roo	Seconda Seconda Wat Drai Dry- Dts (C3) Satu	resent? Yes No
PERFORMANCE Type: Depth (inc.) Type: Depth (inc.) PERFORMANCE PERFORMANCE POROLOG PORO	GY trology Indicators: ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) vosits (B3) at or Crust (B4) osits (B5)		d; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron	ed Leave, 2, 4A, a B11) ertebrates ulfide Od izospher f Reducee Reduction	nd 4B) s (B13) flor (C1) res along d fron (C4 on in Tilled	Living Roc () d Soils (C6	Seconda Wat Drai Dry Satu Sts (C3) Geo Sha Sh	resent? Yes No
PROLOCUTE Surface Value of Management of Man	GY drology Indicators: ators (minimum of of the content of the co	ne requirę	d; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ed Leave , 2, 4A, a B11) ertebrates sulfide Od nizospher f Reduced Reduction	s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D	Living Roc () d Soils (C6	Hydric Soil Pro Seconda Wat Drai Dry- Sato Sts (C3) FAC Rais	resent? Yes No
Pestrictive L Type: Depth (inc Remarks: POROLOG Vetland Hyd Vetland Hyd Surface V High Wal Saturatio Water Ma Sediment Drift Depty Algal Mal Iron Depty Surface S Inundatio	GY drology Indicators: ators (minimum of of the continum of of the continum o	ne require	d; check all that apply) Water-Stain MLRA 1, Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leave , 2, 4A, a B11) ertebrates sulfide Od nizospher f Reduced Reduction	s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D	Living Roc () d Soils (C6	Hydric Soil Pro Seconda Wat Drai Dry- Sato Sts (C3) FAC Rais	resent? Yes No
YDROLOG Vetland Hyd Saturatio Water Ma Sediment Drift Dept Algal Mal Iron Depo Surface S Inundatio	GY drology Indicators: eators (minimum of	ne require	d; check all that apply) Water-Stain MLRA 1, Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leave , 2, 4A, a B11) ertebrates sulfide Od nizospher f Reduced Reduction	s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D	Living Roc () d Soils (C6	Hydric Soil Pro Seconda Wat Drai Dry- Sato Sts (C3) FAC Rais	resent? Yes No
Pestrictive L Type: Depth (inc Remarks: POROLOG Vetland Hyd Primary Indica Surface V High Water Ma Sediment Drift Depto Algal Mal Iron Depto Surface S Inundatio Sparsely	GY trology Indicators: ators (minimum of or Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) rosits (B3) tt or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial II Vegetated Concaver	magery (B Surface (d; check all that apply) Water-Stain MLRA 1, Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S 17) Other (Expli	ned Leave, 2, 4A, a B11) ertebrates sulfide Odnizospher f Reduced Reduction Stressed ain in Red	nd 4B) s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D marks)	Living Roo l) d Soils (C6 1) (LRR A	Hydric Soil Pro Seconda Wat Drai Dry- Sato Sts (C3) FAC Rais	resent? Yes No
Print Depict National Print Depict National Print Depict National National Print Depict National Natio	GY trology Indicators: ators (minimum of of the content of the co	magery (B Surface (d; check all that apply) Water-Stain MLRA 1, Salt Crust (I) Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leave, 2, 4A, a B11) ertebrates culfide Od nizospher f Reduced Reduction Stressed ain in Reduced ain Reduced ain in Reduced ain in Reduced	nd 4B) s (B13) for (C1) res along d fron (C4 on in Tilled Plants (D marks)	Living Roo l) d Soils (C6 1) (LRR A	Hydric Soil Pro Seconda Wat Drai Dry- Sato Sts (C3) FAC Rais	resent? Yes No

0		NA 14	da will a Sampling Date: 7/16/20
Project/Site: TI-E(SOC)		City/County: 19 (Ct)	State: (A Sampling Point: 620
Applicant/Owner:	llosea	Carlier Terroschie Der	State. Sampling Fount.
Investigator(s): MISha, Schwart, nelsey Mi	CX 300/3 V	Section, Township, Rai	slone (%): /2
Landform (hillslope, terrace, etc.): Suale		Local relief (concave, o	convex, none): Slope (%):
			Long: Datum:
Soil Map Unit Name:		141	NWI classification:
Are climatic / hydrologic conditions on the site typical for this		ar? Yes/_ No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signature.			Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na			eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing	sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		Is the Sampled	Arma
	4	within a Wetlan	
Wetland Hydrology Present? Yes No Remarks:	<u></u>		
VEGETATION – Use scientific names of plant			
	Absolute	Dominant Indicator	Dominance Test worksheet:
2000-00-00-00-00-00-00-00-00-00-00-00-00	% Cover	Species? Status	Number of Dominant Species
			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
4.			Species Across All Strata:(B)
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1		×	Total % Cover of: Multiply by:
2			OBL species x 1 =
3			FACW species 4 x2= 8
4			FAC species 85 x3 = 255
5.	_	= Total Cover	FACU species x4=28
Herb Stratum (Plot size: 1m2)		- Total Cover	UPL species x 5 =
1. Lotus conculatus	65	Y CAC	Column Totals: 96 (A) 291 (B)
2. Trifolium repens	15	FAC	Prevalence Index = B/A = 3.03
3. Runex conglomeratus	4	- EACW	Hydrophytic Vegetation Indicators:
4. Agrostis statoniters	2	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Ranin culus repens	- Ş	FAC	2 - Dominance Test is >50%
6. Anthoxanthim daratum	+	FACU	N 3 - Prevalence Index is ≤3.01
7. Mantago lancedata 8. Crenis capillaris	-	CACL	4 - Morphological Adaptations [†] (Provide supporting data in Remarks or on a separate sheet)
9.		FRO	5 - Wetland Non-Vascular Plants ¹
10.		*	Problematic Hydrophytic Vegetation¹ (Explain)
11.			¹Indicators of hydric soil and wetland hydrology must
	100	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1			Hydrophytic Vegetation
		Tatal Causa	Present? Yes V No
% Bare Ground in Herb Stratum		= Total Cover	
Remarks: 5ft from wetland edge	Co.	nter of swal	e 1012 At from wetland edge.
Passes Dominance Test	out h	Jot Preval	ience Index. Does not pass
FAC-Neutral Test. Not's	stron	naly hydr	ophytic.

0.50	100000	224
c	\sim 1	
~	L 71	

Mc4 7/16/26 Sampling Point: W3T2-U

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc²	
(inches) Color (moist) % Color (moist) % Type ¹ Loc ²	Texture Remarks
6-3 /0483/3 /00	Loam
3-15 164 13/2 100	Loam
True Constitution De Destrict Date Production Con Constitution Con Control Control	21 1'
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gill Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	rains. ² Location PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11) Depleted Matrix (F3)	
Thick Dark Surface (A12) Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8)	wetland hydrology must be present.
Restrictive Layer (if present):	unless disturbed or problematic.
Type	
Depth (inches):	Hydric Soil Present? Yes No
Remarks	Trydric doi: 7 tes 110
Itematika	
HYDROLOGY	
TI DIOLOGI	
Wetland Hydrology Indicators:	
	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except High Water Table (A2)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Multiple Marks (B1) Aquatic Invertebrates (B13)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) obs (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) and Hydrology Present? Yes No

Project/site: Pierson		City/County: Mck	rivileyville san	npling Date: 7/16/20
Applicant/Owner:			State: A San	npling Point: (J3T24)
Investigator(s): M. Schwarz, H. Mr.	Donald	Section, Township, Ra	ange:	
Landform (hillslope, terrace, etc.): Swale		Local relief (concave.	convex none): CooCAVC	Slope (%): 2-5
Subregion (LRR):	Lat:		Long:	Datum:
Soil Map Unit Name:			NWI classification	
Are climatic / hydrologic conditions on the site typical f				2.42((4.7)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" prese	
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in	
SUMMARY OF FINDINGS - Attach site n	nap showing	sampling point	locations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Yes		L. H. C		
Hydric Soil Present? Yes		Is the Sample within a Wetla	,	No
Wetland Hydrology Present? Yes/	_ No	within a vvena	uioi iea A	NO
/EGETATION – Use scientific names of p	Janto			
LOCIATION - Ose scientific fiames of	Absolute	Dominant Indicator	Dominance Test workshee	••
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Specie	
1			That Are OBL, FACW, or FA	
2			Total Number of Dominant	-
3			Species Across All Strata:	_2(B)
4			Percent of Dominant Species	5
Sapling/Shrub Stratum (Plot size:)		= Total Cover	That Are OBL, FACW, or FA	
1,			Prevalence Index workshe	et:
2.			Total % Cover of:	
3.			OBL species	
4.			FACW species	
5			FAC species	
1 22		= Total Cover	FACU species	
Herb Stratum (Plot size:	10	V CAC	UPL species	
1. Latus Corniculatus	20	YEAC	Column Totals:	(A)(B)
2. Trifolium repens 3. Rumex conglomoratus	-20	Y EAC	Prevalence Index = B/	
4. Parentucellia viscosa		FAC	Hydrophytic Vegetation Inc	
- Aarostis stolonifera	- a	CAC	1 - Rapid Test for Hydro	
a Holcus lanatus		FAC	1 2 - Dominance Test is >	
. Festuca perennis		CAC	3 - Prevalence Index is s	
Banunculus repens	3	743	4 - Morphological Adapta data in Remarks or o	ations ¹ (Provide supporting
Crepis capillaris		FAU	5 - Wetland Non-Vascula	
10.			Problematic Hydrophytic	
11,	200 - 100 -	-	¹ Indicators of hydric soil and	
	109 =	Total Cover	be present, unless disturbed	or problematic.
Woody Vine Stratum (Plot size:)				
			Hydrophytic	,
2.			Vegetation Present? Yes	No
% Bare Ground in Herb Stratum		Total Cover	163_4	NO
Remarks: Sft from wetlande	dae O	ISSES Non	NORDER TEL	
- I TION I WE TIAN ISC	cox. To	1000	milarice icst.	
The state of the s	0			

SOIL							Md 2/161	20 Sampling Point: W3 T2-
Profile Desc	ription: (Describe t	o the depth	needed to docum	ent the i	ndicator	or confirm	the absence o	
Depth	Matrix			Features				
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	_Loc²	<u>Texture</u>	Remarks
0-4	10482/2		7.54R 4/6	10		m	Loan	
4-14	109RZ/Z	80_	7.542 4/6	20		M	Loan -	
						1816-		No. Disposition at a section
	oncentration, D=Depl Indicators: (Applica	THE RESIDENCE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN			-	g Sand Gr		tion. PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ ;
Histosol		iolo to un El	_ Sandy Redox (S		,			Muck (A10)
	oipedon (A2)	_	_ Stripped Matrix (Parent Material (TF2)
Black Hi	stic (A3)	_	Loamy Mucky M	ineral (F1) (except	MLRA 1)		Shallow Dark Surface (TF12)
	n Sulfide (A4)	–	_ Loamy Gleyed M)		Other	(Explain in Remarks)
	d Below Dark Surface ark Surface (A12)	(A11)	Depleted Matrix Redox Dark Surl	13			3Indicators	of hydrophytic vegetation and
_	flucky Mineral (\$1)	4	_ Depleted Dark S					d hydrology must be present
	Sleyed Matrix (S4)	_	_ Redox Depression		•			disturbed or problematic.
Restrictive I	Layer (if present):							
Туре:			_					
Depth (inc	ches):						Hydric Soil P	resent? Yes Y No
Remarks:								
HYDROLO	GY							
Wetland Hyd	drology Indicators:					***		
Primary Indic	cators (minimum of or	ne required;						ary Indicators (2 or more required)
_	Water (A1)		Water-Stair		0.50	xcept		ter-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			, 2, 4A, a	ind 4B)			4A, and 4B)
Saturation	larks (B1)		Salt Crust (Aquatic Inv		e (R13)			inage Patterns (B10) -Season Water Table (C2)
	nt Deposits (B2)		Hydrogen S					uration Visible on Aerial Imagery (C9)
	posits (B3)		Oxidized RI			Living Root		omorphic Position (D2) Swale
1.00	at or Crust (B4)		Presence o	•		_	7	allow Aquitard (D3)
Iron Dep	oosits (B5)		Recent Iron	Reduction	on in Tille	d Soils (C6	FA(C-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A)	Rai	sed Ant Mounds (D6) (LRR A)
	on Visible on Aerial I		Other (Expl	lain in Re	marks)		Fro	st-Heave Hummocks (D7)
	y Vegetated Concave	Surface (B8	3)					
Field Obser			V - ""					
Surface Wat			Depth (inc					
Water Table			Depth (inc					D
Saturation Projection (includes cap		es No	Depth (inc	nes)		_ wetia	ana Hyarology	Present? Yes No
	corded Data (stream	gauge, moni	toring well, aerial p	hotos, pre	evious ins	pections), i	if available:	-
Remarks:								

			sampling Date: 7/201
Applicant/Owner:			State: CA Sampling Point: D372
nvestigator(s): M. Schwarz, K. W	AcDonald Secti	on Township Re	ange
andform (hillslope, terrace etc.): 51,314	loca	l relief (concave	convex, none): COOCAIR Slope (%): 5
Subregion (LRR):	Lat	richer (concave,	Long: Datum:
Soil Map Unit Name:	Lat.		
are climatic / hydrologic conditions on the site ty	-in-life-ship time of cons.		NWI classification:
			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrolog			"Normal Circumstances" present? Yes V No No
Are Vegetation, Soil, or Hydrolog			eeded, explain any answers in Remarks.) locations, transects, important features, etc
44 4 4 4 4 4 5 4 5 4 5	No V		,
Hydric Soil Present? Yes	No_V	Is the Sample	1 Area nd? Yes No
Wetland Hydrology Present? Yes	No	within a Wetlai	nd? Yes No V
Remarks: 6ft from wetter VEGETATION – Use scientific name:	9		
		minant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover Spe		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
4,	= To	otal Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 1m2		, -	That Are OBL, FACW, or FAC:
1. Rubus ursinus		LEACU	Total % Cover of: Multiply by:
2			OBL species x1 =
3			FACW species x 2 =
4			FAC species x 3 =
J	SC = TO	tal Cover	FACU species x 4 =
Herb Stratum (Plot size: 100)	<u> </u>	. –	UPL species x 5 =
1. Agrostis stolonife 2	<u> 25 </u>	Y FAC	Column Totals: (A) (B)
2. Anthoxanthum colora		L EACO	Prevalence Index = B/A =
3. Parentucellia viscos	<u>a 10 , </u>	YEAC	Hydrophytic Vegetation Indicators:
4. Lotus carniculatus		_ FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Hupochaeris radicata 6. Potentilla anserina		FACU	△2 - Dominance Test is >50%
7. Symphotrichym chile	~ -	OBL	3 - Prevalence Index is ≤3.0¹
8.	ne I	EAC_	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			Indicators of hydric soil and wetland hydrology must
	CIN	al Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:			
1			Hydrophytic
2			Present? Yes No \/
% Bare Ground in Herb Stratum Remarks:		al Cover	
Does not pass D	ominance te	st, Ope	s not pass FAC-Neutral

7/76/76 McK Sampling Point: W373-V

Profile Description: (Describe to the de	D. J. P. June	
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type ¹ Loc ²	Texture Remarks
0-12 104R3/2.5 85	7.54R46 15 C m	Sandy loam-Chrima Toohish
12-16 109 RZ/1 90	7544/6 15 Cm	Sandlean Amper to be a burial
757.1507.		A horizon
		75 . 41 / 4-2
	M=Reduced Matrix, CS=Covered or Coated Sand Gr	
Hydric Soil Indicators: (Applicable to a	Il LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (\$5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)	Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Other (explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	3Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type:		L
Depth (inches)		Hydric Soil Present? Yes No
Remarks:		
Soil chroma, of Z.	Soil indicator	high to make a
· · · · · · · · · · · · · · · · · · ·	Soil indicator	
HYDROLOGY	Soil indicator	
HYDROLOGY Wetland Hydrology Indicators:		
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requirement)	red; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required to the surface Water (A1)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	red: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3)	red; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	red: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	red: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the control of the con	red: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	red: check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	red: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B1)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required in the second	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations:	red; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Yes	water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Stunted or Stressed Plants (D1) (LRR A) (B7) Other (Explain in Remarks)	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present?	red: check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Company of the Company of the	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, 1)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, 1)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, 1)	red; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Passon		City/County: MCK	Newsle_ Sampling Date: 7/2013
Applicant/Owner:			State: Sampling Point:
Investigator(s): M. Schwarz, H. McT	bland	Section, Township, Rar	nge:
andform (hillslope, terrace, etc.): Surlle		Local relief (concave, o	convex, none): COT 3VP Slope (%): 540
Subregion (LRR):	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical	for this time of yea	ar? Yes No	(If no, explain in Remarks.)
kre Vegetation, Soil, or Hydrology	significantly	disturbed? Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eded, explain any answers in Remarks.)
			ocations, transects, important features, etc.
Hydrophylic Vegetation Present? Yes			,
The state of the s	No	Is the Sampled	
Wetland Hydrology Present? Yes		within a Wetlan	nd? Yes V NO
Remarks: 6ft from wetta /EGETATION – Use scientific names of	9		
	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species That Are OBL FACW or FAC: (A)
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata: (B)
3			Species Across All Strata: (B)
4		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1		A	Total % Cover of: Multiply by:
2			OBL species 18 x1= 18
3			FACW species
1			FAC species <u>56</u> x3= 168
		= Total Cover	FACU species
Herb Stratum (Plot size: 1m²)	*	- Total Gover	UPL species x 5 =
. Agrostis stolmitera	40	Y FAC	Column Totals: 96 (A) 268 (B)
Hypocharis radicata	16	Y FAW	Prevalence Index = B/A =
Parentucullia viscosa	_8_	EAL	Hydrophytic Vegetation Indicators:
Lotus carniculatus		EAC_	1 - Rapid Test for Hydrophytic Vegetation
Holcus lanatus	_2_	FAC	N 2 - Dominance Test is >50%
. Anthoxanthum odgratum		- EAW	¥ 3 - Prevalence Index is ≤3.0¹
Plantago lanceolata		EACU	4 - Morphological Adaptations ¹ (Provide supporting
totentilla anserina		asc	data in Remarks or on a separate sheet)
Eleocharis aciculari		ask	5 - Wetland Non-Vascular Plants ¹
or HAberian susceptionique.	2 10	- BL	Problematic Hydrophytic Vegetation¹ (Explain)
1. Juneus ensifolious	97	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)			
			Hydrophytic
			Vegetation /
Bare Ground in Herb Stratum		= Total Cover	Present? Yes No
			N. Y
emarks: Does not pass domina	nce test	, or FAC-Ne	Utral, Passes Dravalence

SOIL					4/	05/05	Mc4	Sampling Point: 03 13-10
Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confirm	the absence of indi	cators.)
Depth	Matrix		Redo	x Features	5			
(inches)	Color (moist)		Color (maist)	%	Type ¹	Loc ²		Remarks
5-8	104RZ/Z	90	7.54244	10		m	LOGM/Sandy	Loan
8-14	10422/2	85	7.57 R 4/4	15			Loam	
,								
l 			<u> </u>					
	oncentration, D=Dep					d Sand Gr		PL=Pore Lining, M=Matrix.
*	Indicators: (Applic	able to all L			ad.)			Problematic Hydric Soils ³ :
Histosol		-	Sandy Redox (2 cm Muck	
	oipedon (A2)	-	Stripped Matrix			MIDAN	· · · · · · · · · · · · · · · · · · ·	Material (TF2)
	stic (A3)	-	Loamy Mucky N			MLRA 1)		ow Dark Surface (TF12) lain in Remarks)
	n Sulfide (A4) d Below Dark Surfac	- /A11\	Loamy Gleyed Depleted Matrix)		Other (Exp	iam in Remarks)
	ark Surface (A12)	E (ATT)	Redox Dark Su				3 Indicators of by	drophytic vegetation and
	lucky Mineral (S1)	7	Depleted Dark	0.5	7)		•	rology must be present,
	Bleyed Matrix (S4)	-	Redox Depress		.,		5	bed or problematic.
	Layer (if present):							
Type:								
	ches):		_				Hydric Soil Preser	nt? Yes X No
Remarks:						-		
I Ciliains.								
							_	
HYDROLO	GY							
	drology Indicators:							
	cators (minimum of o		chack all that appl	w			Secondary In	dicators (2 or more required)
		ne reguirea,			(DO) /			
	Water (A1)		Water-Sta			xcept		lained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)			1, 2, 4A, a	ind 4B)			nd 4B)
Saturation			Salt Crust		100 a m.)			Patterns (B10)
	larks (B1)		Aquatic In					son Water Table (C2)
	nt Deposits (B2)		Hydrogen					on Visible on Aerial Imagery (C9)
	oosits (B3)		Oxidized F			100		phic Position (D2) Swale
	at or Crust (B4)		Presence			(6)		Aquitard (D3)
Iron Dep			Recent Iro					utral Test (D5)
100	Soil Cracks (B6)		Stunted or			1) (LRR A)		Ant Mounds (D6) (LRR A)
Inundati	on Visible on Aerial I	magery (B7)	Other (Exp	olain in Re	marks)		Frost-He	ave Hummocks (D7)
	Vegetated Concave	Surface (B	8)					
Field Obser	vations:							
Surface Water	er Present? Y	es N	o 🗶 Depth (in	ches):		_		
Water Table	Present? Y	es N	o <u></u> Depth (in	ches):		_		
Saturation P			o K Depth (in				and Hydrology Prese	ent? Yes X No
(includes car	oillary fringe)							
Describe Re	corded Data (stream	gauge, mor	nitoring well, aerial (photos, pr	evious ins	pections),	if available:	
19340								
Remarks:	(1/all- 1.	6.1	1	1	10	1	clar 4 1	1
1	WETIONS)	ngaro	1059 4))01	med	V4 J4	י ועס י	strongly hy	aric Soil
		1	,				,	
1								

Project/Site: Plesson		City/County: MC+	in leguille Sampling Date: 7/202
Applicant/Owner:			State: Sampling Point: Sampling Point:
Investigatorial MA S - 1 - 1/ #4 P - 1/		Section Township Ro	nne:
Landform (hillslope, terrace, etc.): Swale		Local relief (concave,	convex, none): COCAVE Slope (%):
Subregion (LRR):	Lat:		_ Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for this time. Are Vegetation, Soil, or Hydrology sign	nificantly	disturbed? Are	"Normal Circumstances" present? Yes No eeded, explain any answers in Remarks.)
Are Vegetation, Soil, or Hydrology natu SUMMARY OF FINDINGS - Attach site map sh			
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	4	Is the Sampled within a Wetla	d Area
Remarks: 7 ft from wethand ed			
	bsolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: (A)
4		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Plot size:) 1. Rubus usinus 2 3 4 5			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 =
4.4	0	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m -			UPL species x 5 =
1. Lotus Carniculatus	No. of Concession, Name of Street, or other Designation, Name of Street, or other Designation, Name of Street,	Y FAC	Column Totals: (A) (B)
2. Holcustanatus	10	FAC	Prevalence Index = B/A =
3. Leucanthemunulgare	5	- CACU	Hydrophytic Vegetation Indicators:
4. Anthoxanthim odorstum 1 5. Hypochaoris radicata	8	- FACU CALU	1 - Rapid Test for Hydrophytic Vegetation \(\sum_2 \) 2 - Dominance Test is >50%
6. Agrostis stolonifers	5	FAC	3 - Prevalence Index is ≤3.01
7. RIMEY ACETOCE (\a) 8			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain)
11	71 :	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:)		- Otal Gover	
2			Hydrophytic Vegetation
% Bare Ground in Herb Stratum		Total Cover	Present? Yes No
Remarks: Does not pass domin	ance	test, do	es not pass FAC-neutral

OIL		- 41	AB 1 1 1 1 1		19 . 4	1/6	Me me	(Sampling Point: W3 T4
	cription: (Describe t	to the dep				or confirm	the absence	of indicators.)
Depth	Matrix Color (main)	0/	The state of the s	x Feature:		Loc²	Tartura	Describe
(inches)	Color (moist)	<u>%</u>	Color (moist)	%_	Type'		Texture	Remarks
0-8	10423/25	75	7.5424/4	<u> </u>	<u> </u>	<u>M</u>	Loam	Chroma Toohigh
8-16	104R/3/2.5	90	7.5429/4	<u> 10 </u>		M	Loan	
				-				
		<u> </u>						
Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, CS	S=Covered	d or Coate	d Sand Gi	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
lydric Soll	Indicators: (Applica	able to all	LRRs, unless other	rwise note	ed.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			2 cm	n Muck (A10)
Histic E	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
Black H	istic (A3)		Loamy Mucky M			MLRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)	Victor Problems	Loamy Gleyed		:)		Othe	er (Explain in Remarks)
	d Below Dark Surface	(A11)	Depleted Matrix	*			3,_ ,,	
	ark Surface (A12)		Redox Dark Su					rs of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark		7)			nd hydrology must be present.
	Gleyed Matrix (S4) Layer (if present):		Redox Depress	SIONS (FO)			unies	s disturbed or problematic.
	Layer (ii present).							
Type:								Present? Yes No K
LIEDID (ID	ches):							
Remarks:	broma Too	hish	be mut h	ny dr n	Soil	indi	Hydric Soil	Present? Yes No <u>*</u>
Remarks:	broma Too	hish	be mut h	ny dr n	Soil	indi		Present? Yes No A
YDROLO Wetland Hy	GY drology Indicators:				Soil	indi	cation	
YDROLO Wetland Hy	broma Too		d; check all that appl	ly)			cations Second	idary Indicators (2 or more required)
YDROLO Vetland Hy Primary India	GY drology Indicators:		d; check all that appl	ly) ined Leave	es (B9) (e		cations Second	
YDROLO Wetland Hy Primary Indic	OGY drology Indicators:		d; check all that appl	ly)	es (B9) (e		Catics Secon	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLO Vetland Hy Surface	OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)		d; check all that appl	ly) ined Leav 1, 2, 4A, a	es (B9) (e		Catics Secon	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2
YDROLO Vetland Hy Surface High Wa	OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2)		d; check all that appl Water-Sta MLRA	ly) ined Leav 1, 2, 4A, a (B11)	es (B9) (e and 4B)		Cation Secon W	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
YDROLO Vetland Hy Primary India Surface High Wa Saturati Water M	OGY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3)		d; check all that appl Water-Sta MLRA Salt Crust	iv) nined Leav 1, 2, 4A, a (B11) overtebrate	es (B9) (e and 4B) s (B13)		Second — W	idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
YDROLO Wetland Hy Primary India Surface High Water Notes Sedime	OGY Idrology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1)		d; check all that appl Water-Sta MLRA Salt Crust Aquatic in	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Od	es (B9) (e and 4B) s (B13) dor (C1)	xcept	Secon — W — D — D — S	idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
YDROLO Vetland Hy Primary India Surface High Water Notes Water Notes Sedime Drift De Algal Ma	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		d; check all that appl Water-Sta MLRA Salt Crust Aquatic in Hydrogen	ly) ined Leave 1, 2, 4A, a (B11) wertebrate Sulfide Oc Rhizosphe	es (B9) (e and 4B) s (B13) dor (C1) res along	xcept Living Roo	Secon W D Sets (C3) G	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cseomorphic Position (D2) hallow Aquitard (D3)
YDROLO Vetland Hy Primary India Surface High Wa Saturati Water N Sedime Drift Dep Algal Ma Iron Dep	droingy Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized f	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduce	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4	xcept Living Roo	Secon W D Sets (C3) G	Idary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cseomorphic Position (D2)
YDROLO Vetland Hy Primary India Surface High Wa Saturati Water N Sedime Drift Dep Algal Ma	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leav. 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille	xcept Living Roo S) d Soils (C6	Secon W D Sis (C3) Si) R	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cseomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron Dep Surface	droingy Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	ne require	d; check all that appl Water-Sta MLRA Salt Crust Aquatic in Hydrogen Oxidized if Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille	xcept Living Roo S) d Soils (C6	Secon W D Sis (C3) Si) R	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
YDROLO Wetland Hy Primary India Surface High Water Notes Sedime Drift Dep Algal Mater Mate	droma Too OGY Idrology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	ne require	d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduce on Reduction	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille	xcept Living Roo S) d Soils (C6	Secon W D Sis (C3) Si) R	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C5) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hy Primary India Surface High Wa Saturati Water N Sedime Drift De Algal Ma Iron Dey Surface Inundati Sparsel	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial In y Vegetated Concave vations:	me require magery (B s Surface (d; check all that appl Water-Sta MLRA Salt Crust Aquatic in Hydrogen Oxidized f Presence Recent Iro Stunted or (B8)	ly) ined Leave 1, 2, 4A, a (B11) ivertebrate Sulfide Or Rhizosphe of Reduce on Reduction r Stressed plain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D	xcept Living Roo) d Soils (C6 1) (LRR A	Secon W D Sis (C3) Si) R	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C5) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal Ma Iron Dep Surface Inundati Sparsel	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial In y Vegetated Concave vations:	me require magery (B s Surface (d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on	ly) ined Leave 1, 2, 4A, a (B11) ivertebrate Sulfide Or Rhizosphe of Reduce on Reduction r Stressed plain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D	xcept Living Roo) d Soils (C6 1) (LRR A	Secon W D Sis (C3) Si) R	Idary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C5) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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YDROLO Wetland Hy Primary India Surface High Water M Sedime Drift Del Algal Mater M Iron Del Surface Inundati Sparsel Field Obser Surface Water Table Saturation Perincludes ca	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial In y Vegetated Concave vations: ter Present? Ye	magery (B Surface (d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on Other (Exp (B8) No Y Depth (in No Y Depth (in	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduction Stressed plain in Reserved plain in Reserved	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D emarks)	Living Rock S) d Soils (C6 1) (LRR A	Secon W D D Sols (C3) S F A A A A B B B B B B B B B	Idary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cs) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hurnmocks (D7)
YDROLO Netland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal Ma Iron Dep Surface Inundati Sparsel Field Obser Surface Water Table Saturation P includes cal	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye Present?	magery (B Surface (d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on Other (Exp (B8) No Y Depth (in No Y Depth (in	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduction Stressed plain in Reserved plain in Reserved	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D emarks)	Living Rock S) d Soils (C6 1) (LRR A	Secon W D D Sols (C3) S F A A A A B B B B B B B B B	Idary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cs) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hurnmocks (D7)
YDROLO Wetland Hy Primary India Surface High Water M Sedime Drift Del Algal Mater M Iron Del Surface Inundati Sparsel Field Obser Surface Water Table Saturation Perincludes ca	droingy Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial In y Vegetated Concave vations: ter Present? Present? Ye Present?	magery (B Surface (d; check all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted on Other (Exp (B8) No Y Depth (in No Y Depth (in	ined Leave 1, 2, 4A, a (B11) evertebrate Sulfide Oc Rhizosphe of Reduction Stressed plain in Reserved plain in Reserved	es (B9) (e and 4B) s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D emarks)	Living Rock S) d Soils (C6 1) (LRR A	Secon W D D Sols (C3) S F A A A A B B B B B B B B B	Idary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cs) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hurnmocks (D7)
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WETLAND DETERMINATION DATA	, Oram	1110/20
Project/Site: Purson	City/County: Mr. Ki	nleuville Sampling Date:
11 11 00 11	Section, Township, Range	ge:
Landform (hillslone terrace etc.): < L. A.	Local relief (concave, co	onvex, none): Cor (Cay C
Subregion (LRR): A	at:	Long.
Soil Map Unit Name:		NWI classification:
Are climatic / hydrologic conditions on the site typical for this time	ne of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signif	ficantly disturbed? Are "N	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology nature	rally problematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	owing sampling point lo	cations, transects, important features, etc.
	Is the Sampled	Area
Wetland Hydrology Present? Yes No	within a Wotland	Area d? Yes No
Remarks: 8 ft from wettand en		
	osolute Dominant Indicator	Dominance Test worksheet:
	Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.		Total Number of Dominant Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	= Total Cover	That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
1		Total % Cover of: Multiply by:
2		OBL species x1 =
3		FACW species x 2 =
4		FAC species x 3 =
5	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: \m²	- Total Cover	UPL species x 5 =
1. Juncus hesperius !	0	Column Totals: (A) (B)
2. Latus carniculatus	8 Y FAC	Prevalence Index = B/A =
3. Juncus butanius	3 Y FACW	Hydrophytic Vegetation Indicators:
4. Agrostis stolonitera 1	S Y FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Calycocia declinata 6. Equisatum telmateia		¥ 2 - Dominance Test is >50%
7. Holcus lahatus	<u>a</u>	3 - Prevalence Index is s3.01
8. Anthoxanthum cooration		4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9. Fleocharis acicularis	2 OBL	5 - Wetland Non-Vascular Plants¹
10		Problematic Hydrophytic Vegetation¹ (Explain)
11		Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:	16 = Total Cover	be present, unless disturbed or problematic.
1		
3		Hydrophytic /
	= Total Cover	Vegetation Present? Yes No
% Bare Ground in Herb Stratum		
Remarks: Passes Dominance, 1	Passes FAC	Neutral
, ,		

rottle Des	cription: (Describe	to the dep	th needs	d to docur	nent the i	ndicator	or confirm	the absence of	Sampling Point: <u>W37</u> of Indicators.)
Depth	Matrix		_	Redo	x Features	S			
(inches)	Color (moist)	%		(moist)	%	Type	Loc ²	Texture	Remarks
0-6	10483/2	90	1.5	Y R 4/6	10		M	Lean	
6-15	10482/2	35	11	11 11	15	C	m	Sands	loam
									-
	Indicators: (Appli						ed Sand Gr		ation: PL=Pore Lining, M=Matrix. 's for Problematic Hydric Soils ³ :
Histoso		cable to all				:a.)			
_	pipedon (A2)			dy Redox (S oped Matrix					Muck (A10) Parent Material (TF2)
	listic (A3)			my Mucky N) (excep	t MLRA 1)		Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loa	my Gleyed I	Matrix (F2				r (Explain in Remarks)
	d Below Dark Surfa	ce (A11)	Dep	leted Matrix	(F3)			Ye 20 %	
	ark Surface (A12)			ox Dark Su leted Dark		71			s of hydrophytic vegetation and
	Mucky Mineral (S1) Gleyed Matrix (S4)			lox Depress		()			nd hydrology must be present, s disturbed or problematic.
	Layer (if present):			- Воргозо	10110 (1 0)				production.
			_						
rype.									
Type: Depth (in	iches)							Hydric Soil I	Present? Yes \coprod No 🔙
	nches)							Hydric Soil I	Present? Yes Y No
Depth (in	nches)							Hydric Soil I	Present? Yes <u> </u>
Depth (in	OGY							Hydric Soil I	Present? Yes <u>Y</u> No
Depth (in lemarks:	OGY odrology Indicators		d; check	all that appli	v)				Present? Yes No
Depth (in emarks:	OGY ordrology Indicators		d; check			es (B9) (c	except	Second	dary Indicators (2 or more required
Depth (in emarks: /DROLO /etland Hy rimary Indi	OGY odrology Indicators		d; check	Water-Sta			except	Second	
Depth (in emarks: /DROLO /etland Hy rimary Indi Surface High W	OGY orology Indicators icators (minimum of water (A1)		d; check	Water-Sta	ined Leavi 1, 2, 4A, a		except	Second Wa	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1
Depth (in emarks: /DROLO /etland Hy rimary Indi Surface High W. Saturati	OGY vdrology Indicators icators (minimum of Water (A1) later Table (A2)		d; check	Water-Stai	ned Leave 1, 2, 4A, a (B11)	nd 4B)	ехсерt	Second Will Dr	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B)
Depth (in emarks: /DROLO /etland Hy rimary Indi Surface High W. Saturati Water M	OGY (drology Indicators icators (minimum of the Water (A1) (ater Table (A2) ion (A3)		d; check	Water-Sta MLRA Salt Crust	ined Leave 1, 2, 4A, a (B11) vertebrate	nd 4B) s (B13)	ехсерt	Second Will Dr	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10)
Depth (in emarks: DROLO fetland Hy rimary Indi Surface High Water Market Mater	OGY Adrology Indicators Adro		d; check	Water-Stai MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe	ind 4B) s (B13) dor (C1) res along	Living Roo	Second Write Dr Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (comorphic Position (D2) Suale
Depth (in emarks: DROLO fetland Hy rimary Indi _ Surface _ High W Saturati _ Water M Sedime _ Drift De _ Algat M.	ordrology Indicators icators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) and Deposits (B2) at or Crust (B4)		d; check	Water-Stai MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc thizospher of Reduce	nd 4B) s (B13) dor (C1) res along d Iron (C	Living Roo	Second Write Dr Dr Dr Sa ts (C3) Ge Sh	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (ecomorphic Position (D2) الممالة المالة
Depth (in emarks: DROLO fetland Hy rimary Indi Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De	order of the control		d; check	Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized F Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce in Reduction	ind 4B) s (B13) flor (C1) res along d Iron (C	j Living Roo (4) ed Soils (C6	Second W: Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (Beomorphic Position (D2) Sual (Ballow Aquitard (D3) (C-Neutral Test (D5)
Depth (in emarks: DROLO fetland Hy rimary Indi Surface High Wa Saturati Water N Sedime Drift De Algat M Iron De; Surface	order of the control	<u>one require</u>		Water-Stain MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce n Reduction	s (B13) dor (C1) res along d Iron (C on in Tille Plants (C	Living Roo	Second Will Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (aeomorphic Position (D2) Such (anallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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/DROLO /etland Hy rimary Indi _ Surface _ High Water M _ Sedime _ Drift De _ Algal M _ Iron De; _ Surface _ Inundat _ Sparsel	ody Indicators Indica	one require		Water-Stain MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce n Reduction	s (B13) dor (C1) res along d Iron (C on in Tille Plants (C	j Living Roo (4) ed Soils (C6	Second Will Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (aeomorphic Position (D2) Such (anallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Depth (in emarks: /DROLO /etland Hy rimary Indi Surface High W Saturati Water N Sedime Drift De Algal M Iron De; Surface Inundat Sparsel ield Obseri urface Water Water N	ody Indicators Indicator	Imagery (B	7) B8)	Water-Stai MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce in Reduction Stressed plain in Re	s (B13) for (C1) res along d Iron (C on in Tilk Plants (I marks)	g Living Roo (4) ed Soils (C6 D1) (ERR A)	Second Will Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (aeomorphic Position (D2) Such (anallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Depth (in emarks: DROLO fetland Hy rimary Indi Surface High W Saturati Water N Sedime Drift De Algat M Iron De; Surface Inundat Sparsel ield Obser urface Water Table aturation Pencludes ca	ody redrology Indicators redr	Imagery (B ve Surface (Yes Yes	7) B8) No Y No Y	Water-Stai MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizospher of Reduce on Reduction Stressed plain in Re ches): ches):	s (B13) dor (C1) res along d Iron (C on in Tilk Plants (I marks)	Living Roo (4) ed Soils (C6 O1) (LRR A)	Second Will Dr Dr Sa ts (C3)	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 1 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aenal Imagery (aeomorphic Position (D2) Such (anallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)

Project/Site: Pusson		City/County: Mck	unlequile Sampling Date: 7/2020
Applicant/Owner:			State: Sampling Point:
Investigator(s): M. Schwarz, K.	Moorald	Section, Township, Ra	ange:
Landform (hillslope, terrace, etc.): 500	ale	Local relief (concave,	convex, none): Concave Slope (%): 10-
Subregion (LRR): A	Lat:	1000	Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site		ear? Yes / No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydro			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydro			eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attacl	n site map showing	g sampling point l	locations, transects, important features, etc.
	s No		/
Hydric Soil Present?		Is the Sampled within a Wetla	
Wetland Hydrology Present? Y		Within a Wella	16310
VEGETATION – Use scientific nam	nes of plants.		
Tree Stratum (Plot size:)		Dominant Indicator Species? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2.			
3			Total Number of Dominant Species Across All Strata: (B)
4			
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 1m		VI -0 -	Prevalence Index worksheet:
1. Rubus armeniacus	72	YEAC	Total % Cover of: Multiply by:
2. Salix hockeriana	5	PACID PACID	OBL species
3			FACW species 5 x2= 10
4			FAC species 102_ x3 = 306
5	40		FACU species x4 =28
Herb Stratum (Plot size: _\m²	-10	_ = Total Cover	UPL species 23 x5= 115
1. Raphanus sativus	20	Y UPL	Column Totals: 137 (A) 449 (B)
2. Cicsium vulgare	5	FACU	Prevalence Index = B/A = 3.28
3. Trifolium repens	15	Y PAC	Hydrophytic Vegetation Indicators:
4. Letus accordiatus	15	YEAC	1 - Rapid Test for Hydrophytic Vegetation
5. Ranunculus repens	10	V FAC	¥ 2 - Dominance Test is >50%
6. Agraptis stolonifesa	10	FAC	∑3 - Prevalence Index is ≤3.0¹
. Vicia sativa	3	UPL	4 - Morphological Adaptations¹ (Provide supporting
B. Rimex crispus	3	FAC	data in Remarks or on a separate sheet)
Holcus landatus	4	EAC	5 - Wetland Non-Vascular Plants*
10. Anthoxanthum orbit	stim 2	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
1			Indicators of hydric soil and wetland hydrology must
	97	_= Total Cover	be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:			Section 1
7			Hydrophytic
			Vegetation Present? Yes \rightarrow No
6 Bare Ground in Herb Stratum	1 1 5	_= Total Cover	103_V NO
The state of the s			
Does not pass Prova	ice Test. I	loes not i	pass FAC-Neutral.
THE MAL MIET DOWNER	1000 (-1-		and the transfer to

DIL					0/20	Mcc	Sampling Point <u>W3</u>	15
	cription: (Describe	to the depth	needed to document th		confirm the	absence	of indicators.)	
Depth	Matrix		Redox Feat		1 = 2	T		
inches)	Color (moist) 104233	160		Type¹		Texture	Remarks	
<u> 3-6</u>						oan		
1-15	10483/3	100				ands	Login	
								_
ype: C=C	Concentration, D=Dep	letion, RM=R	educed Matrix, CS=Cove	ered or Coated (Sand Grains		cation PL=Pore Lining, M=Matrix.	•
dric Soil	Indicators: (Application	able to all LF	RRs, unless otherwise r	noted.)			ors for Problematic Hydric Soils	
_ Histoso	l (A1)		_ Sandy Redox (\$5)			2 cr	n Muck (A10)	
	pipedon (A2)	_	_ Stripped Matrix (S6)				Parent Material (TF2)	
_	listic (A3)	_	_ Loamy Mucky Mineral		ILRA 1)		y Shallow Dark Surface (TF12)	
	en Sulfide (A4)	- (0.14)	_ Loamy Gleyed Matrix	(F2)		Oth	er (Explain in Remarks)	
	ed Below Dark Surface Park Surface (A12)	= (A11) _	 Depleted Matrix (F3) Redox Dark Surface (I 	F6)		³ Indicate	ors of hydrophytic vegetation and	
	Mucky Mineral (S1)	2	_ Depleted Dark Surface				and hydrology must be present,	
_	Gleyed Matrix (\$4)	_	S B ' (F				s disturbed or problematic.	
	Layer (if present):			-7				
	nches):				F	lvdric Soil	Present? Yes No _	X
DROLO								
-	rdrology Indicators:		shook all that souls?			Ć.	ndani Indiantore /2 or mare service	۱۱ م
	icators (minimum of o	ne required:					ndary Indicators (2 or more require	
	Water (A1)		Water-Stained Le	181 181 181 10 10 10 10 10 10 10 10 10 10 10 10 10 1	ept	_ v	Vater-Stained Leaves (B9) (MLRA	1, 2,
	ater Table (A2)		MLRA 1, 2, 4/	4, and 46)		_	4A, and 4B)	
Saturati	Marks (B1)		Salt Crust (B11) Aquatic Invertebr	atoe (B13)		-	Prainage Patterns (B10) Pry-Season Water Table (C2)	
	nt Deposits (B2)		Hydrogen Sulfide			-	ry-season vvater rable (C2) aturation Visible on Aerial Imagen	. (Ca)
	posits (B3)		Oxidized Rhizosp	3.00	vina Ronts (Geomorphic Position (D2)	y (C3)
50	at or Crust (B4)		Presence of Red		ring recots (hallow Aquitard (D3)	
	posits (B5)		Recent Iron Redu		Soils (C6)		AC-Neutral Test (D5)	
	Soil Cracks (B6)		Stunted or Stress		•		taised Ant Mounds (D6) (LRR A)	
-	ion Visible on Aerial I	magery (B7)	Other (Explain in				rost-Heave Hummocks (D7)	
7	y Vegetated Concave			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			, , , , , , , , , , , , , , , , , , , ,	
	rvations:							
rface Wat	ter Present? Y	es No	Depth (inches):					
		es No	16					
turation F		es No	1 -		Wetland	Hydrolog	y Present? Yes No /	<u>k_</u>
		gauge, moni	toring well, aerial photos	previous inspe	ections), if a	/ailable:		
emarks:					***	*		
emarks:								
emarks:	,				,			
marks:								

Project/Site: Pierson	_ City/County: Mchinley, 1/2 Sampling Date: 7/20	Sho
Applicant/Owner:	State: Sampling Point: 123.31	1.00
Investigator(s): M. Schwarz, H. McDonold	Section, Township, Range:	16
Landform (hillslope, terrace, etc.): Suale	Local relief (concave, convex, none): Con are Slope (%):	W)
Subregion (LRR): Lat:	Long: Datum:	_
Soil Map Unit Name:	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significal		
Are Vegetation, Soil, or Hydrology naturally		
		-4-
SUMMARY OF FINDINGS - Attach site map show	ing sampling point locations, transects, important features	, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No		
Wetland Hydrology Present? Yes No		
VEGETATION - Use scientific names of plants.		
Tree Stratum (Plot size:) Absol % Co 1	wer Species? Status Number of Dominant Species	(A)
2,	Total Number of Dominant	(B)
4	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
Sapling/Shrub Stratum (Plot size:) 1	Prevalence Index worksheet:	
2	Total % Cover of: Multiply by:	
3	OBL species X1=	7.E
4	FACW species x 2 =	
5	FAC species x 3 = FACU species x 4 =	
1.7	= Total Cover	
Herb Stratum (Plot size: 1M	· · · ·	
		_ (B)
2. Holeus lanatus 10 3. Tuncus bufonius 10	Prevalence Index = B/A =	_
	Ar Tyarophytic Vegetation mulcators.	
4. Ranunculus repeas 35 5. Glycer 12. declinata 4	- Trapid Test for Hydrophytic Vegetation	
6. Anthoxanthunodoratun	Y 2 - Dominance Test is >50%	
	5 - Flevalence index is \$5.0	
7	4 - Morphological Adaptations¹ (Provide supp data in Remarks or on a separate sheet)	orting
9.		
10		2
11		
	= Total Cover be present, unless disturbed or problematic.	iust
Woody Vine Stratum (Plot size:)	19410010	
1		
2	Vegetation /	
	= Total Cover Present? Yes V No	
% Bare Ground in Herb Stratum		
Remarks: Passes Dominance test.	Passes FAC-Neutral	

OIL								20 MCK		ampling Point: <u>U</u>	15 12
rofile Des	cription: (Describe	to the dep	th neede	d to docur	nent the i	ndicator	or/confirm	the absenc	e of indicato	ors.)	
Depth	<u>Matrix</u>			The same of the sa	x Feature:		1 2			D	
(inches)	Color (moist)	- %		(moist)	_%	Type ¹	_Loc2	<u>Texture</u>		Remarks	
2-8	104RZ/1	15		23/1	25			Loan	<u> </u>		
8-14	1042/1	80		4' 5	20	<u> </u>	<u>m</u>	Loan			
						=					
	Concentration, D=Dep	oletion, RM	=Reduced	d Matrix, CS	S=Covered	d or Coate	ed Sand Gr	ains. ² L	ocation: PL=	Pore Lining, M=M	latrix.
4	Indicators: (Applic									lematic Hydric S	
_ Histoso	ol (A1)		San	dy Redox (S5)			20	m Muck (A1)	D)	
	Epipedon (A2)			ped Matrix					d Parent Ma		
_	Histic (A3)			ny Mucky I	-		t MLRA 1)			ark Surface (TF1)	2)
	en Sulfide (A4)			ny Gleyed	1.5)		Ot	her (Explain i	in Remarks)	
	ed Below Dark Surfac	æ (A11)		leted Matrix				1			
_	Park Surface (A12)		77	ox Dark Su						phytic vegetation	
	Mucky Mineral (S1)			leted Dark		7)			-	y must be presen	H _c
	Gleyed Matrix (S4) Layer (if present):		Rea	ox Depress	ions (Fo)			Unit	ss disturbed	or problematic.	
										10 .	
Depth (ir	nches):							Hyaric So	il Present?	Yes _X N	4o
lemarks:										<u> </u>	
								,			
	DGY										
YDROLO	OGY ydrology Indicators:										
YDROLO			d; check i	all that appl				Sec.	ondary Indica	utors (2 or more re	equired)
/DROLO /etland Hy rimary Ind Surface	ydrology Indicators: icators (minimum of o water (A1)			Water-Sta	ined Leav		except		Water-Staine	ed Leaves (B9) (M	
OROLO Vetland Hy rimary Ind Surface High W	ydrology Indicators: icators (minimum of o water (A1) later Table (A2)			Water-Sta	ined Leav 1, 2, 4A, a		except	_	Water-Staine 4A, and 4	ed Leaves (B9) (M	
PROLO Petland Hy rimary Ind Surface High W Saturat	ydrology Indicators: icators (minimum of o e Water (A1) /ater Table (A2) tion (A3)			Water-Sta MLRA Salt Crust	ined Leav 1, 2, 4A, a (B11)	and 4B)	except		Water-Staine 4A, and 4 Drainage Pat	ed Leaves (B9) (M IB) tterns (B10)	
PROLO Petland Hy rimary Ind Surface High W Saturat Water I	ydrology Indicators: icators (minimum of o water (A1) /ater Table (A2) tion (A3) Marks (B1)			Water-Sta MLRA Salt Crust Aquatic In	ined Leav 1, 2, 4A, a (B11) vertebrate	and 4B) s (B13)	except		Water-Staine 4A, and 4 Drainage Pai Dry-Season	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2)	LRA 1
/DROLO /etland Hy rimary Ind _ Surface _ High W _ Saturat _ Water I _ Sedime	ydrology Indicators: icators (minimum of o water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)			Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide O	and 48) es (B13) dor (C1)			Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) Isible on Aerial Im	LRA 1
/DROLO /etland Hy rimary Ind _ Surface _ High W _ Saturat _ Water I _ Sedime _ Drift De	ydrology Indicators: icators (minimum of ore Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)			Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F	ined Leav 1, 2, 4A, a (B11) vertebrate Sulfide Oo Rhizosphe	end 48) es (B13) dor (C1) res along	Living Roo		Water-Staine 4A, and 4 Drainage Pai Dry-Season Vi Saturation Vi Geomorphic	ed Leaves (B9) (M (B) Itterns (B10) Water Table (C2) isible on Aerial Im Position (D2)	LRA 1
/DROLO /etland Hy rimary Ind _ Surface _ High W _ Saturat _ Water I _ Sedime _ Drift De _ Algal M	ydrology Indicators: icators (minimum of o water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4)			Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	es (B13) dor (C1) res along	Living Roo 4)	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pai Dry-Season V Saturation Vi Geomorphic Shallow Aqui	ed Leaves (B9) (M (B) Itterns (B10) Water Table (C2) isible on Aerial Im Position (D2)	LRA 1
/DROLO /etland Hy rimary Ind Surface _ High W _ Saturat _ Water I _ Sedime _ Drift De _ Algal M _ Iron De	ydrology Indicators: icators (minimum of control of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) And or Crust (B4) eposits (B5)			Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oo Rhizosphe of Reduce on Reducti	end 48) es (B13) dor (C1) res along ed Iron (C4) on in Tille	Living Roo 4) d Soils (C6	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season Vi Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	ed Leaves (B9) (M (B) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) 5 itard (D3) Test (D5)	agery (
/DROLO /etland Hy rimary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	ydrology Indicators: icators (minimum of control of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6)	<u>one require</u>		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (Co on in Tille Plants (D	Living Roo 4)	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) founds (D6) (LRR	agery (
/DROLO /etland Hy rimary Ind _ Surface _ High W _ Saturat _ Water I _ Sedime _ Drift De _ Algal M _ Iron De _ Surface _ Inundar	ydrology Indicators: icators (minimum of ea Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) ea Soil Cracks (B6) tion Visible on Aerial	<u>one require</u> Imagery (B		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (Co on in Tille Plants (D	Living Roo 4) d Soils (C6	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (M (B) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) 5 itard (D3) Test (D5)	agery (
/DROLO /etland Hy /rimary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse	ydrology Indicators: icators (minimum of of et Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concav	<u>one require</u> Imagery (B		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed	es (B13) dor (C1) res along ed Iron (Co on in Tille Plants (D	Living Roo 4) d Soils (C6	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) founds (D6) (LRR	agery (
PROLO Vetland Hy rimary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations:	<u>one require</u> Imagery (B e Surface (Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted of Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) res along ed Iron (Coon in Tille Plants (Do	Living Roo 4) d Soils (C6 11) (LRR A)	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) founds (D6) (LRR	agery (
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse Field Obse	ydrology Indicators: icators (minimum of control of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	Imagery (B e Surface (37) (B8)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted of Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oo Rhizosphe of Reduce on Reducti r Stressed plain in Re	es (B13) dor (C1) res along ed Iron (Co on in Tille Plants (De emarks)	Living Roo 4) d Soils (C6 11) (LRR A	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) founds (D6) (LRR	agery (
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse Field Obse	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present?	Imagery (B e Surface (res	37) (B8) No Y	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	ined Leav. 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re ches): ches):	es (B13) dor (C1) res along ed Iron (C- on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) 🔀	Water-Staine 4A, and 4 Drainage Par Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ed Leaves (B9) (M (B) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) flounds (D6) (LRR Hummocks (D7)	agery (wa (
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse Field Obse Surface Wa Water Table Saturation I includes ca	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial ely Vegetated Concavervations: ater Present? e Present? present?	Imagery (B e Surface (res res	37) (B8) No Y No Y	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized f Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re ches): ches): ches):	es (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (De	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) \nearrow	Water-Staine 4A, and 4 Drainage Par Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ed Leaves (B9) (M IB) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) founds (D6) (LRR	agery (wa (
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse Gurface Wa Vater Table Saturation I	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) ition (A3) Marks (B1) ent Deposits (B2) eposits (B3) flat or Crust (B4) eposits (B5) e Soil Cracks (B6) ition Visible on Aerial ly Vegetated Concavervations: ater Present? Present?	Imagery (B e Surface (res res	37) (B8) No Y No Y	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized f Presence Recent Iro Stunted or Other (Exp	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reducti r Stressed plain in Re ches): ches): ches):	es (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (De	Living Roo 4) d Soils (C6 01) (LRR A	ots (C3) \nearrow	Water-Staine 4A, and 4 Drainage Par Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	ed Leaves (B9) (M (B) Iterns (B10) Water Table (C2) isible on Aerial Im Position (D2) itard (D3) Test (D5) flounds (D6) (LRR Hummocks (D7)	agery (wa (

Project/Site: Mchinleyville: Applicant/Owner: Investigator(s): M. Schwarz, K.	m 2011	City/County: 14(CA)	Sam Sam	ipling Date:
Applicant/Owner:	1400.44		State: Sam	ipling Point(_3160
nvestigator(s): IVI. SCAOBAZ H	PIEUS (C) INI.	Section, Township, Ra	nge:	C V
andform (hillslope, terrace, etc.): Swale				
Subregion (LRR): A				
Soil Map Unit Name:			NWI classification	
are climatic / hydrologic conditions on the site t	ypical for this time of ye			
Are Vegetation, Soil, or Hydrold	gy significantly	disturbed? Are	"Normal Circumstances" preser	nt? Yes V No
are Vegetation, Soil, or Hydrolo	gy naturally pro	blematic? (If ne	eded, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach	site map showing	sampling point le	ocations, transects, im	portant features, etc
Hydrophytic Vegetation Present? Yes	No J/_			1
	No V	Is the Sampled	Area	
Wetland Hydrology Present? Yes	No	within a Wetlar	nd? Yes	No V
/EGETATION – Use scientific name	se of plante			-
LOCIATION - Use scientific flame	Absolute	Dominant Indicator	Dominance Test workshee	
Tree Stratum (Plot size:) 1	% Cover	Species? Status	Number of Dominant Specie. That Are OBL, FACW, or FA	s o
2.			Total Number of Dominant	
3			Species Across All Strata:	(B)
4			Percent of Dominant Species	
Sanling/Chrish Stratum / Plat size:		= Total Cover	That Are OBL, FACW, or FA	
Sapling/Shrub Stratum (Plot size:			Prevalence Index workshee	et:
1			Total % Cover of:	Multiply by:
3			OBL species	
4			FACW species	
5.			FAC species	
		= Total Cover	FACU species	
Herb Stratum (Plot size:)	100	V CAGO	UPL species	x5=
1. Hupochaeris radicat	7 12	-X FACU	Column Totals:	(A)(B)
2. Parentucellia viscos 2	15	VENC	Prevalence Index = B/	
3. Lotus corniculatus 4. Anthoxanthum oder	Jun B	- ACU	Hydrophytic Vegetation Inc	
5. Carex abounts	6	CBL	1 - Rapid Test for Hydro	
6. Plantago lantadat	18	YEAW	2 - Dominance Test is >	
7. Rubus Armeniacus	14	FAC	3 - Prevalence Index is s 4 - Morphological Adapts	
8. Holcus Iznatus	12	FAC	data in Remarks or o	
9. Agrostis stolonifer	a 25	Y FAC	5 - Wetland Non-Vascula	ar Plants ¹
10.			Problematic Hydrophytic	Vegetation ¹ (Explain)
11			*Indicators of hydric soil and	
		= Total Cover	be present, unless disturbed	or problematic.
Woody Vine Stratum (Plot size:				
1		******	Hydrophytic Vegetation	1
2	-	= Total Cover	Present? Yes	No <u>/</u>
% Bare Ground in Herb Stratum				
Does not pass	und edge	Mes not	Dass Domin	nancoTest
		000	Da 20 00 11	(00)

OIL	dha sa sha ala	with pended to dear	mant that I	-diam're		- Al I		lantaen l	
rofile Description: (Description: Mat			ment the i		or connit	iii uie absel	ICE OF ITIO	icators.)	
inches) Color (mois		Color (moist)	%	Type'	Loc²	Texture	<u> </u>	Rem	arks
-3 104 R31	2 100	_	-	_	_	Loan	<u> </u>		
-16 104 R3/Z		7.54 R4/C	10	L	m	Sanda		v	
	— 7 								
1									
	-								
Type: C=Concentration, D=					d Sand G				ing M=Matrix
ydric Soil Indicators: (Ap	plicable to a			ed.)		Indic	ators for	Problematic	Hydric Soils ³ :
_ Histosol (A1)		Sandy Redox (cm Mucl		
_ Histic Epipedon (A2)		Stripped Matrix		1) /				nt Material (Ti	
Black Histic (A3) Hydrogen Sulfide (A4)		Loamy Mucky I Loamy Gleyed		1	MLKA 1		_	ow Dark Surf Dain in Rema	
_ Depleted Below Dark Su	rface (A11)	Depleted Matri		,		— '	-mmi (EA)	rmn: 111115111 G	
Thick Dark Surface (A12		Redox Dark Su				3India	ators of h	ydrophytic ve	getation and
Sandy Mucky Mineral (S	1)	Depleted Dark	Surface (F	7)				Irology must I	-
_ Sandy Gleyed Matrix (S		Redox Depress	sions (F8)			ur	lless dist	irbed or probl	ematic
estrictive Layer (if preser	t):						11		
Туре									
Depth (inches):	Too hig	sh for hydi	یک ک	y.]		Hydric S	ioll Press	ent? Yes_	No_ <u>}C</u>
OROLOGY		sh for hydi	حد ۵۰	<i>y.</i>]		Hydric S	ioli Prese	ent? Yes_	No _K
emarks. Chroma	ors:			»·/			, , , , ,	•	No _X
OROLOGY	ors:	red, check all that app			xcept		econdary	ndicators (2 d	or more required)
POROLOGY Vetland Hydrology Indicate Indicators (minimum	ors:	red, check all that app	ly)	es (B9) (e	xcept		condary	ndicators (2 d	or more required)
PROLOGY Vetland Hydrology Indicatorimary Indicators (minimum Surface Water (A1)	ors:	red, check all that app	ly) ained Leav 1, 2, 4A, a	es (B9) (e	xcept		econdary Water-S	ndicators (2 c	or more required) es (B9) (MLRA 1, 2,
PROLOGY Vetland Hydrology Indicate Irimary Indicators (minimum Surface Water (A1) High Water Table (A2)	ors:	red, check all that app Water-Sta MLRA Salt Crust	ly) ained Leav 1, 2, 4A, a	es (B9) (e and 4B)	xcept		condary Water-S	ndicators (2 c Stained Leave and 4B)	or more required) es (89) (MLRA 1, 2,
PROLOGY Vetland Hydrology Indicate Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	ors:	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir	ly) ained Leave 1, 2, 4A, a	es (B9) (e and 4B) s (B13)	xcept		Water-S 4A, Drainag Dry-Sea	ndicators (2 o Stained Leave and 4B) se Patterns (8 ason Water T	or more required) s (B9) (MLRA 1, 2,
PROLOGY Vetland Hydrology Indicate frimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ors:	red, check all that app — Water-Sta MLRA — Salt Crusi — Aquatic Ir — Hydrogen	ained Leave 1, 2, 4A, a t (B11) avertebrate	es (B9) (e and 4B) s (B13) dor (C1)		<u>S</u> e	Water-S 4A, Drainag Dry-Sea Saturati	ndicators (2 o Stained Leave and 4B) se Patterns (8 ason Water T	or more required) es (B9) (MLRA 1, 2, es (B9)
PROLOGY Vetland Hydrology Indicate frimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ors:	red, check all that app — Water-Sta MLRA — Salt Crust — Aquatic Ir — Hydrogen — Oxidized	ained Leave 1, 2, 4A, a t (B11) avertebrate Sulfide Oc	es (B9) (e and 4B) s (B13) dor (C1) res along	Living Ro	<u>S</u> e	Water-S 4A, Drainag Dry-Sea Saturati	ndicators (2 o Stalned Leave and 4B) e Patterns (8 ason Water To on Visible on	or more required) es (B9) (MLRA 1, 2, es (B9)
PROLOGY Vetland Hydrology Indicate Informacy Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Presence	ained Leave 1, 2, 4A, a t (B11) evertebrate i Sulfide Oc Rhizosphe	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4	Living Ro	Seconds (C3)	Water-S 4A, Drainag Dry-Sea Saturati Geomo	ndicators (2 o Stalned Leave and 4B) se Patterns (8 ason Water Ta on Visible on rphic Position	or more required) es (B9) (MLRA 1, 2, es (B9)
PROLOGY Vetland Hydrology Indicate Internation Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Iri Stunted o	hy) ained Leave 1, 2, 4A, a t (B11) avertebrate s Sulfide Oc Rhizosphe of Reduce on Reduction	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D	Līving Ro 1) d Soils (C	Se	econdary Water-S 4A, Drainag Dry-Se: Saturati Geomo Shallow FAC-Ne	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D Ant Mounds (or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5)
PROLOGY Vetland Hydrology Indicate Internation (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A6	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Presence Recent In Stunted o	hy) ained Leave 1, 2, 4A, a t (B11) avertebrate s Sulfide Oc Rhizosphe of Reduce	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D	Līving Ro 1) d Soils (C	Se	econdary Water-S 4A, Drainag Dry-Se: Saturati Geomo Shallow FAC-Ne	ndicators (2 of Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D	or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5)
PROLOGY Vetland Hydrology Indicate frimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A6 Sparsely Vegetated Cor	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Presence Recent In Stunted o	hy) ained Leave 1, 2, 4A, a t (B11) avertebrate s Sulfide Oc Rhizosphe of Reduce on Reduction	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D	Līving Ro 1) d Soils (C	Se	econdary Water-S 4A, Drainag Dry-Se: Saturati Geomo Shallow FAC-Ne	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D Ant Mounds (or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5)
PROLOGY Vetland Hydrology Indicate Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Coricled Observations:	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, a t (B11) evertebrate i Sulfide Oc Rhizosphe of Reduce on Reduction or Stressed iplain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D	Līving Ro 1) d Soils (C	Se	econdary Water-S 4A, Drainag Dry-Se: Saturati Geomo Shallow FAC-Ne	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D Ant Mounds (or more required) es (B9) (MLRA 1, 2, es (B9)
PROLOGY Vetland Hydrology Indicate Internation (Maintain Marks (Marks (Mark	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irr Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, a 1 (B11) avertebrate 1 Sulfide Oc Rhizosphe 1 of Reduce 1 or Reduction 1 Stressed 1 plain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Līving Ro 1) d Soils (C	Se	water-s Water-s Drainag Dry-Ser Saturati Geomo Shallow FAC-Ne	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D Ant Mounds (or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5)
Vetland Hydrology Indicate Internation Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6 Inundation Visible on Ae Sparsely Vegetated Corticled Observations: Surface Water Present? Vater Table Present?	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized Presence Recent In Stunted o (B7) Other (Ex	hy) ained Leave 1, 2, 4A, a t (B11) avertebrate a Sulfide Or Rhizosphe of Reduce on Reduction r Stressed plain in Re anches):	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Ro	Se	econdary Water-S 4A, Drainag Dry-Se: Saturati Geomo Shallow FAC-Ne Raised Frost-H	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on rephic Position Aquitard (D3 autral Test (D Ant Mounds (eave Hummo	or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5) D6) (LRR A) cks (D7)
PROLOGY Vetland Hydrology Indicate Internation (Minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Corrield Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present? Saturation Present?	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irr Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, at 1 (B11) avertebrate 1 Sulfide Oo Rhizospher of Reduce on Reduction or Stressed applain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Ro i) d Soils (C 1) (LRR i	oots (C3)	Water-S 4A, Drainag Dry-Sei Saturati Geomo Shallow FAC-Ne Raised Frost-H	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on riphic Position Aquitard (D3 autral Test (D Ant Mounds (or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (C2) (C2) (C2) (C3) (C3) (C4) (C5) (C5) (C6) (LRR A) (C6) (C7)
PROLOGY Vetland Hydrology Indicate Internation Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on A6 Sparsely Vegetated Corrield Observations: Surface Water Present? Vater Table Present?	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irr Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, at 1 (B11) avertebrate 1 Sulfide Oo Rhizospher of Reduce on Reduction or Stressed applain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Ro i) d Soils (C 1) (LRR i	oots (C3)	Water-S 4A, Drainag Dry-Sei Saturati Geomo Shallow FAC-Ne Raised Frost-H	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on rephic Position Aquitard (D3 autral Test (D Ant Mounds (eave Hummo	or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (C2) (C2) (C2) (C3) (C3) (C4) (C5) (C5) (C6) (LRR A) (C6) (C7)
PROLOGY Vetland Hydrology Indicate Internation (Minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Ae Sparsely Vegetated Corrield Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present? Saturation Present?	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irr Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, at 1 (B11) avertebrate 1 Sulfide Oo Rhizospher of Reduce on Reduction or Stressed applain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Ro i) d Soils (C 1) (LRR i	oots (C3)	Water-S 4A, Drainag Dry-Sei Saturati Geomo Shallow FAC-Ne Raised Frost-H	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on rephic Position Aquitard (D3 autral Test (D Ant Mounds (eave Hummo	or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (C2) (C2) (C2) (C3) (C3) (C4) (C5) (C5) (C6) (LRR A) (C6) (C7)
PROLOGY Vetland Hydrology Indicator (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Active Sparsely Vegetated Corticled Observations: Surface Water Present? Vater Table Present? Vater Table Present? Saturation Present? Includes capillary fringe) Describe Recorded Data (st	ors: of one requi	red, check all that app Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irr Stunted o (B7) Other (Ex	ained Leave 1, 2, 4A, at 1 (B11) avertebrate 1 Sulfide Oo Rhizospher of Reduce on Reduction or Stressed applain in Re	es (B9) (e and 4B) s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Ro i) d Soils (C 1) (LRR i	oots (C3)	Water-S 4A, Drainag Dry-Sei Saturati Geomo Shallow FAC-Ne Raised Frost-H	ndicators (2 c Stained Leave and 4B) se Patterns (8 ason Water To on Visible on rephic Position Aquitard (D3 autral Test (D Ant Mounds (eave Hummo	or more required) s (B9) (MLRA 1, 2, s10) able (C2) Aerial Imagery (C9 (D2) b) 5) D6) (LRR A) cks (D7)

Project/Site: Pierson	City/County: Mc Kinleyville Sampling Date: 8/11/20
Applicant/Owner:	State: A Sampling Point: WO 1 (6 WE)
Investigator(s): M. Schwarz, H. McDonald:	Section, Township, Range:
Landform (hillstope, terrace, etc.): 54) ale	Local relief (concave, convex, none): COOCAVE Slope (%): 5-16
Subregion (LRR): A Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year	
Are Vegetation, Soil, or Hydrology significantly of	
Are Vegetation, Soil, or Hydrology naturally prof	
	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes V No No
Remarks:	
VEGETATION – Use scientific names of plants.	
Tree Stratum (Plot size:) Absolute % Cover	Dominant Indicator Species? Status Number of Dominant Species >2
1	Number of Dominant Species
2.	
3	(Total Number of Dominant
4.	
	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size:)	Prevalence Index worksheet:
1	I Total % Cover of Mulfibry by
2	ODL Species X -
3	FACVV Species X 2 =
4	FAC species x3 =
5	= Total Cover FACU species x 4 =
Herb Stratum (Plot size: Im 2	UPL species x 5 =
1. Tuncos effosus 27	
2. Potentilla anserina 10	CRI
3. Hupericum anagalloides 20	Prevalence Index = B/A = Hydrophytic Vegetation Indicators:
4. Adobstis stolonifer a 20	1 - Rapid Test for Hydrophytic Vegetation
5. Hupochaeris radicati 5	EACU Y 2 - Dominance Test is >50%
6. Latus corniculatus 10	3 - Prevalence Index is ≤3.0¹
7. Holcus Iznatus 3	4 - Morphological Adaptations¹ (Provide supporting
8. Anthoxanthum charatum !	data in Remarks or on a separate sheet)
Bules armeniaus à	5 - Wetland Non-Vascular Plants¹
10. Parentucellia viscosa 2	Problematic Hydrophytic Vegetation (Explain)
11. Sisyrinchium californicum	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:	= Total Cover
1.	Third Control of the
2.	Hydrophytic Vegetation
	= Total Cover Present? Yes No
% Bare Ground in Herb Stratum	
	Passes dominance test passes FACNE

	ription: (Describe Matrix				x Features						,	
epth nches)	Color (moist)	%	Color (m		%	Type'_	_Loc²	Textu	re		Remarks	
-3	10483/2	8,5	7.548	4/4	15		m					
1-14	1048 2/2	810	7.5 YR	4/4	20	-	m					
				7.7								
	oncentration, D=De						ed Sand Gr				ore Lining	
	Indicators: (Appli	cable to al				ed.)		Inc			ematic Hyd	Iric Soils ³ :
Black Hi Hydroge Depleted Thick Da Sandy M	pipedon (A2) istic (A3) en Sulfide (A4) d Below Dark Surfa- ark Surface (A12) Mucky Mineral (S1)	ce (A11)	Loamy Deplete Redox Deplete	d Matrix Mucky M Gleyed ed Matrix Dark Su ed Dark	(S6) Vineral (F1 Matrix (F2 c (F3))	MLRA 1)	oln oln	Red Pa Very Si Other (dicators welland	hallow Da Explain in of hydropl hydrology) erial (TF2) rk Surface (r Remarks) hytic vegeta must be pror problema	ition and
	Gleyed Matrix (S4) Layer (if present):		Redox	Depress	sions (Fb)				uniess o	isturbed t	or problema	IIC,
SHIGHTO												
Type								4				
Depth (in	ches):							Hydri	Soil Pr	esent?	Yes X	_ No
Depth (in	ches):		,					Hydri	s Soil Pr	esent?	Yes X	No
Depth (increases) DROLO etland Hy	ches):	:	ad about all	that and								
Depth (incomerks) DROLO etland Hy imary India	GY drology Indicators cators (minimum of	:							Seconda	ery Indicat	ors (2 or mo	ore required)
DROLO atland Hy mary India Surface	GY drology Indicators cators (minimum of	:		/ater-Sta	ined Leave		xcept		Seconda	ery Indicat	ors (2 or mo	
DROLO Partiand Hy Imary India Surface High Wa	drology Indicators cators (minimum of Water (A1) ater Table (A2)	:	_ v	/ater-Sta MLRA	ined Leave		xcept		Seconda Wate	ery Indicate er-Stained A, and 48	ors (2 or mo	ore required)
DROLO Transport Tran	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	:	_ ^	/ater-Sta MLRA alt Crust	ined Leave 1, 2, 4A, a (B11)	and 4B)	xcept		Seconda Wate 4	ny Indicater-Stained A, and 48 nage Patt	ors (2 or mo I Leaves (8: 3) ems (810)	ore required) 9) (MLRA 1, 2,
DROLO atland Hy mary India Surface High Wa Saturati Water M	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)	:	_ ^ ^ _ s _ A	/ater-Sta MLRA alt Crust quatic In	ined Leave 1, 2, 4A, a (B11) vertebrate	and 4B) s (B13)	xcept		Seconda Wate 4 Drai	ery Indicater-Stained A, and 48 nage Patt Season V	ors (2 or mod Leaves (8:3) ems (810) Vater Table	ore required) 9) (MLRA 1, 2,
DROLO atland Hy mary India Surface High Wa Saturati Water M Sedime	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Aarks (B1) nt Deposits (B2)	:	_ s _ s _ H	/ater-Sta MLRA alt Crust quatic In ydrogen	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc	and 4B) s (B13) dor (C1)			Seconda Wate 4 Drai Dry-	ery Indicate er-Stained A, and 4E nage Path Season Viration Vis	ors (2 or mo 1 Leaves (8: 3) ems (810) Vater Table ible on Aeri	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9)
DROLO Patland Hy Imary India Surface High Water M Saturati Water M Sedime Drift De	of Y drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3)	:	_ s _ s _ a _ H	/ater-Sta MLRA alt Crust quatic In ydrogen (xidized I	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe	s (B13) dor (C1) res along	Living Rec		Seconda Wate 4 Drai Dry- Satu	er-Stained A, and 4E nage Path Season V Iration Vis morphic F	ors (2 or mo 1 Leaves (8: 3) ems (810) Vater Table ible on Aeri Position (D2)	ore required) 9) (MLRA 1, 2, (C2) al Imagery (C9)
DROLO etland Hy imary India Surface High Water M Saturati Water M Sediment	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Aarks (B1) nt Deposits (B2)	:		MLRA alt Crust quatic In ydrogen xidized I	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce	s (B13) dor (C1) res along d Iron (C4	Living Rec	ots (C3)	Seconda Wate 4 Drai Dry- Satu Geo	ery Indicater-Stained A, and 48 nage Path Season Viration Vis morphic F	ors (2 or mo 1 Leaves (8: 3) ems (810) Vater Table ible on Aeri	(C2) al Imagery (C9)
DROLO Ptland Hy mary India Surface High Wa Saturati Water M Sedime Drift De Algal Ma	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	:	S A H P R	MLRA alt Crust quatic In ydrogen xidized I resence ecent Iro	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizasphe of Reduce on Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tille	Living Roo 4)	ots (C3)	Seconda Wate 4 Drai Dry Satu 4 Geo Shal	ery Indicater-Stained A, and 48 nage Patt Season Visuration Vis morphic Fillow Aquit	ors (2 or mo I Leaves (8: 3) ems (810) Vater Table ible on Aeri Position (D2) ard (D3)	(C2) al Imagery (C9)
DROLO atland Hy mary India Surface High Wa Saturati Water M Sedimer Drift De Algal Ma Iron De Surface Inundati	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial	: one require	W S A H O P R S S O	later-Sta MLRA alt Crust quatic In ydrogen xidized I resence ecent Iro tunted o	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizasphe of Reduce on Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 4) d Soils (C6	ots (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal	ery Indicater-Stained A, and 4E nage Patt Season Vision Aquitation Ant Medical A	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2) ard (D3)	(C2) al Imagery (C9) S 446
DROLO Control Contr	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Aarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concar	: one require	W S A H O P R S S O	later-Sta MLRA alt Crust quatic In ydrogen xidized I resence ecent Iro tunted o	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizasphe of Reduce on Reduction stressed	s (B13) dor (C1) res along d Iron (C4 on in Tille Plants (D	Living Roo 4) d Soils (C6	ots (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal	ery Indicater-Stained A, and 4E nage Patt Season Vision Aquitation Ant Medical A	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) Fest (D5)	(C2) al Imagery (C9) S 446
DROLO PROLO PR	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) s Soil Cracks (B6) ion Visible on Aerial y Vegetated Concar	: one require		Ater-Sta MLRA alt Crust quatic In ydrogen xidized i resence ecent iro tunted on ther (Ex	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction Totressed plain in Re	s (B13) dor (C1) res along ed Iron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	ots (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal	ery Indicater-Stained A, and 4E nage Patt Season Vision Aquitation Ant Medical A	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) Fest (D5)	(C2) al Imagery (C9) S 446
DROLO etland Hy imary India Surface High Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel eld Obser	ches): drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concarvations: ter Present?	: one require Imagery (I ve Surface Yes	- V - S - A - H - O - P - R - S 37) - O (B8)	Ater-Sta MLRA alt Crust quatic In ydrogen xidized i resence ecent Iro tunted or tunted or	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction of Stressed plain in Re	s (B13) dor (C1) res along ed fron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A	ots (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal	ery Indicater-Stained A, and 4E nage Patt Season Vision Aquitation Ant Medical A	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) Fest (D5)	(C2) al Imagery (C9)
DROLO etland Hy imary India Surface High Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel eld Observation	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial y Vegetated Conca- rvations: ter Present?	imagery (leve Surface	- V - S - A - H - O - P - R - S 37) - O (B8)	Ater-Sta MLRA alt Crust quatic In ydrogen xidized I resence ecent Irc turted or other (Ex	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re	s (B13) dor (C1) res along d fron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	ols (C3)	Seconda Wate Drai Dry Satu Geo Shal FAC Rais Fros	er-Stained A, and 4E nage Patt Season Vis morphic F llow Aquit -Neutral T ed Ant Mo t-Heave F	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) fest (D5) Jummocks ((C2) al Imagery (C9) Swake (LRR A) (D7)
DROLO etland Hy imary India Surface High Water M Sedimer Drift De Algal M Iron De Surface Inundati Sparsel eld Observation F	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial y Vegetated Conca- rvations: ter Present? Present?	: one require Imagery (I ve Surface Yes	- V - S - A - H - O - P - R - S 37) - O (B8)	Ater-Sta MLRA alt Crust quatic In ydrogen xidized I resence ecent Irc turted or other (Ex	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction of Stressed plain in Re	s (B13) dor (C1) res along d fron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	ols (C3)	Seconda Wate Drai Dry Satu Geo Shal FAC Rais Fros	er-Stained A, and 4E nage Patt Season Vis morphic F llow Aquit -Neutral T ed Ant Mo t-Heave F	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) Fest (D5)	(C2) al Imagery (C9) Swake (LRR A) (D7)
Depth (incernaries) DROLO etland Hy imary India Surface High Water M Sediment Drift De Algal M Iron De Surface Inundati Sparsel eld Observation Faculdes ca	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial y Vegetated Conca- rvations: ter Present?	: one require Imagery (I ve Surface Yes Yes	- V - S - A - H - O - P - S - S - S - No - V - No - V	Atter-Sta MLRA alt Crust quatic In ydrogen exidized i resence ecent Irc tunted or tunted or ther (Ex	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re aches): aches):	s (B13) dor (C1) res along d fron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	alts (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal FAC Rais Fros	er-Stained A, and 4E nage Patt Season Vis morphic F llow Aquit -Neutral T ed Ant Mo t-Heave F	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) fest (D5) Jummocks ((C2) al Imagery (C9) Swake (LRR A) (D7)
DROLO etland Hy imary India Surface High Water M Sedime Drift De Algal M Iron De Surface Inundati Sparsel eld Obser arface Water Table	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial by Vegetated Concar reations: ter Present? Present? pulllary fringe)	: one require Imagery (I ve Surface Yes Yes	- V - S - A - H - O - P - S - S - S - No - V - No - V	Atter-Sta MLRA alt Crust quatic In ydrogen exidized i resence ecent Irc tunted or tunted or ther (Ex	ined Leave 1, 2, 4A, a (B11) vertebrate Sulfide Oc Rhizosphe of Reduce on Reduction r Stressed plain in Re aches): aches):	s (B13) dor (C1) res along d fron (C4 on in Tille Plants (D emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	alts (C3)	Seconda Wate 4 Drai Dry Satu A Geo Shal FAC Rais Fros	er-Stained A, and 4E nage Patt Season Vis morphic F llow Aquit -Neutral T ed Ant Mo t-Heave F	ors (2 or mo d Leaves (8:3) ems (810) Vater Table iible on Aeri Position (D2 ard (D3) fest (D5) Jummocks ((C2) al Imagery (C9) Swake (LRR A) (D7)

Project/Site: Presson	City/0	County: Mr. M	Sinterville Sampling Date: 8/11/24
Applicant/Owner:			State: (A Sampling Point: W3T
Investigator(s): M. Schwarz			
			convex, none): CONCAVE Slope (%): 5-
			Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for			
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, et
Hydrophytic Vegetation Present? Yes		Inplining point i	/
Hydric Soil Present? Yes		Is the Sample	i Area
Wetland Hydrology Present? Yes		within a Wetlan	nd? Yes No
VEGETATION – Use scientific names of p		ninant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover Spe	cies? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size: \(\sqrt{2} \)	= To	otal Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B
1. Rubus spectabilis	25	Y CACIL	Prevalence Index worksheet:
2. Ruhis irkinu	-6-	1 100	Total % Cover of: Multiply by:
3			OBL species x 1 =
4.			FACW species x 2 =
5.			FAC species x 3 =
	35 = To	tal Cover	FACU species x 4 =
Herb Stratum (Plot size:)	- 10		UPL species x 5 =
1. Anthox anthum of ratur	v 10 -	FACU	Column Totals: (A) (B)
2. Hypochaeris radicata 3. Latus comiculatus	15	EACO.	Prevalence Index = B/A =
4. Holcus lanatus	_43_	FAL	Hydrophytic Vegetation Indicators:
5. Scochus aspec	_+	FACU	1 - Rapid Test for Hydrophytic Vegetation
6. Agrostis stolonifera	7	FAC	△ 2 - Dominance Test is >50%
- 0			3 - Prevalence Index is ≤3.0¹
8.			4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
9.			5 - Wetland Non-Vascular Plants ¹
10.			Problematic Hydrophytic Vegetation¹ (Explain)
11			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		al Cover	be present, amoss distance of probettatic.
1			Hydrophytic
% Bare Ground in Herb Stratum	= Tot		Present? Yes No
Remarks: 6ft from wetand	bundan	1. 1	
Test, Does not pass	FAC-New	tral.	es not pass Dominance

ofile Description: (De	escribe to t	ne depth r	eeded to doci	MILITARILE CITES III	idicator of	~~!!!!!!!!		ence of Ir	IGICATO	rs.)	
	Matrix			lox Features							
nches) Color (m			Color (moist)	<u>%</u>	Type	Loc ²	Textu			Remarks	3
-3 104R3	12 1	00					609	<u> </u>			
-16 104 R	3/_3	(00		-			Coal	n/Sand	96	oum	
								7	0		
									1		
pe: C=Concentration						Sand Gra				Pore Lining.	M=Matrix. dric Solls ³ :
dric Soil Indicators:	(Applicable	to all LR			a.j		me				and Solls :
_ Histosol (A1) _ Histic Epipedon (A2)		_	Sandy Redox Stripped Matri				_	2 cm Mu Red Par)) erial (TF2)	
Black Histic (A3)			Loamy Mucky) (except N	ILRA 1)	_			ark Surface	(TF12)
Hydrogen Sulfide (A	4)		Loamy Gleyer							n Remarks)	
Depleted Below Dark		11)	Depleted Mat								
Thick Dark Surface (Redox Dark S				3 In			hytic veget	
Sandy Mucky Minera		_	Depleted Darl		7}				T T	y must be p	
Sandy Gleyed Matri strictive Layer (if pre			Redox Depre	ssions (FB)				uniess dis	sturbed	or problema	ILC.
Type:	raenų.										
Type:											
Dooth (inches)-			_				Librari et	Call Dea	00012	Van	No (
Depth (inches): emarks:				7			Hydri	Soil Pre	sent?	Yes	_ No <u></u>
DROLOGY		8					Hydri	Soil Pre	sent?	Yes	_ No <u>\</u>
DROLOGY stland Hydrology Ind	icators:		herk all that an	only).			Hydri				
DROLOGY etland Hydrology Ind imary Indicators (minin	icators:				ne /P0\ /ave	novê.	Hydri	Secondar	y Indica	tors (2 or m	ore required)
DROLOGY stland Hydrology Indicators (mining Surface Water (A1)	icators: num of one		Water-S	tained Leave		cept	Hydri	Secondar	y Indica	tors (2 or m d Leaves (6	
DROLOGY etland Hydrology Ind mary Indicators (minin Surface Water (A1) High Water Table (A	icators: num of one		Water-S MLR	tained Leave A 1, 2, 4A, a		cept	Hydri	Secondar Water	y Indica r-Staine	tors (2 or m d Leaves (E B)	ore required)
DROLOGY etland Hydrology Ind mary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3)	icators: num of one		Water-S MLR. Salt Crus	tained Leave A 1, 2, 4A, a st (B11)	ind 4B)	cept	Hydri	Secondari Water 4A Drain:	y Indica r-Staine a, and 4	lors (2 or m d Leaves (E B) tems (B10)	ore required) 39) (MLRA 1, 2,
DROLOGY etland Hydrology Ind mary Indicators (minin Surface Water (A1) High Water Table (A	icators: num of one		Water-S MLR Salt Crue Aquatic	itained Leave A 1, 2, 4A, a st (B11) Invertebrate	and 4B) s (B13)	cept	Hydri	Secondari Water 4A Drain: Dry-S	y Indica r-Staine A, and 4 age Pat deason V	lors (2 or m d Leaves (E B) tems (B10) Water Table	ore required) 39) (MLRA 1, 2,
DROLOGY etland Hydrology Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1)	icators: num of one		Water-S MLR Salt Cru Aquatic Hydroge	tained Leave A 1, 2, 4A, a st (B11)	and 4B) s (B13) dor (C1)			Secondari Water 4A Draini Dry-S	y Indica r-Staine I, and 4 age Pal deason V	lors (2 or m d Leaves (E B) tems (B10) Water Table	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY Stland Hydrology Individual Mary Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (icators: num of one (2)		Water-S MLR Salt Cru Aquatic Hydroge Oxidized	itained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Oc	nnd 4B) s (B13) dor (C1) res along Li	iving Roo		Secondar — Water 4A — Drain — Dry-S — Satur — Georr	y Indica r-Staine I, and 4 age Pal deason Va ation Vi	lors (2 or m d Leaves (E B) tems (B10) Vater Table sible on Aer	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY etland Hydrology Indi mary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	icators: num of one (2)		Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presence	tained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Oc 1 Rhizospher	s (B13) dor (C1) res along Li	iving Roo	ots (C3)	Secondari Water 4A Drain: Dry-S Saturi Georr	y Indica r-Staine I, and 4 age Pat deason Va ation Va ation Va ation Va ation Va ation Va	tors (2 or m d Leaves (E B) tems (B10) Vater Table sible on Aer Position (D2	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY And Hydrology Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (I	icators: num of one (2) (B2)		Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I	Itained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Oc d Rhizospher e of Reduce	s (B13) dor (C1) res along Li d Iron (C4) on in Tilled	iving Roo Solls (C6	ots (C3)	Secondari Water 4A Drain: Dry-S Satur: Geom Shalld	y Indica r-Staine I, and 4 age Pat deason Va ation Va ation Va norphic ow Aqui Neutral	tors (2 or m d Leaves (8 B) tems (B10) Water Table sible on Aer Position (D2 tard (D3)	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY Itland Hydrology Ind mary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (II Iron Deposits (B5)	icators: num of one (B2) (B2) (B6) n Aerial Ima	required, c	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	Itained Leave A 1, 2, 4A, a st (B11) Invertebrate: en Sulfide Oc d Rhizospher e of Reduce Iron Reduction	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1)	iving Roo Solls (C6	ots (C3)	Secondar Water AA Drain: Dry-S Satur: Geor Shalle FAC- Raise	y Indica r-Staine age Pat deason Va ation Va ation Va double down Aqui Neutral	tors (2 or m d Leaves (EB) tems (B10) Water Table sible on Aer Position (D2 tard (D3) Test (D5)	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY etland Hydrology Indicators (mining Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (I) Iron Deposits (B5) Surface Soil Cracks Inundation Visible of	icators: num of one (B2) (B2) (B6) n Aerial Ima	required, c	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc d Rhizospher se of Reduce Iron Reduction or Stressed	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1)	iving Roo Solls (C6	ots (C3)	Secondar Water AA Drain: Dry-S Satur: Geor Shalle FAC- Raise	y Indica r-Staine age Pat deason Va ation Va ation Va double down Aqui Neutral	lors (2 or m d Leaves (EB) tems (B10) Vater Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6)	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY atland Hydrology Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (Is Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated	icators: num of one (B2) (B2) (B6) n Aerial Ima Concave Si	required, c	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc d Rhizospher se of Reduce Iron Reduction or Stressed	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	iving Roo Solls (C6) (LRR A)	ots (C3)	Secondar Water AA Drain: Dry-S Satur: Geor Shalle FAC- Raise	y Indica r-Staine age Pat deason Va ation Va ation Va double down Aqui Neutral	lors (2 or m d Leaves (EB) tems (B10) Vater Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6)	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
DROLOGY atland Hydrology Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (I I I I I I I I I I I I I I I I I I I	icators: num of one (B2) (B2) (B6) n Aerial Ima Concave Si	gery (B7)	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrate en Sulfide Od I Rhizospher e of Reduce fron Reduction or Stressed Explain in Re	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	iving Roo Solls (C6) (LRR A)	ots (C3)	Secondar Water AA Drain: Dry-S Satur: Geor Shalle FAC- Raise	y Indica r-Staine age Pat deason Va ation Va ation Va double down Aqui Neutral	lors (2 or m d Leaves (EB) tems (B10) Vater Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6)	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
emarks: DROLOGY stland Hydrology Ind imary Indicators (mining) Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (If Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated eld Observations: urface Water Present? fater Table Present? atturation Present?	(B2) (B6) n Aerial Ima Concave Si Yes Yes Yes	gery (B7) urface (B8) No	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc f Rhizospher of Reduce fron Reduction or Stressed explain in Re (inches):	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	Solls (C6) (LRR A)	ots (C3)	Secondari Water 4A Draini Dry-S Saturi Geom Shallo FAC- Raise Frost-	y Indica r-Staine t, and 4 age Pat deason Va ation Va ati	tors (2 or m d Leaves (BB) tems (B10) Water Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6) Hummocks	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
PROLOGY Setland Hydrology Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible o	(B2) (B6) n Aerial Ima Concave Si Yes Yes Yes	gery (B7) urface (B8) No	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc f Rhizospher of Reduce fron Reduction or Stressed explain in Re (inches):	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	Solls (C6) (LRR A)	ots (C3)	Secondari Water 4A Draini Dry-S Saturi Geom Shallo FAC- Raise Frost-	y Indica r-Staine t, and 4 age Pat deason Va ation Va ati	tors (2 or m d Leaves (BB) tems (B10) Water Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6) Hummocks	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
remarks: Procedure and remarks: Petland Hydrology Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (I Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated (Incompanies) Sediment Deposits (B5) Augultus (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated (Incompanies) For the Water Present? For the August (August (August (A)) August (A) For the	(B2) (B6) n Aerial Ima Concave Si Yes Yes Yes	gery (B7) urface (B8) No	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc f Rhizospher of Reduce fron Reduction or Stressed explain in Re (inches):	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	Solls (C6) (LRR A)	ots (C3)	Secondari Water 4A Draini Dry-S Saturi Geom Shallo FAC- Raise Frost-	y Indica r-Staine t, and 4 age Pat deason Va ation Va ati	tors (2 or m d Leaves (BB) tems (B10) Water Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6) Hummocks	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)
emarks DROLOGY etland Hydrology Ind imary Indicators (mining) Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (If Iron Deposits (B5) Surface Soil Cracks Inundation Visible of Sparsely Vegetated eld Observations: urface Water Present? fater Table Present? aturation Present?	(B2) (B6) n Aerial Ima Concave Si Yes Yes Yes	gery (B7) urface (B8) No	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leave A 1, 2, 4A, a st (B11) Invertebrates on Sulfide Oc f Rhizospher of Reduce fron Reduction or Stressed explain in Re (inches):	s (B13) dor (C1) res along Li d fron (C4) on in Tilled Plants (D1) marks)	Solls (C6) (LRR A)	ots (C3)	Secondari Water 4A Draini Dry-S Saturi Geom Shallo FAC- Raise Frost-	y Indica r-Staine t, and 4 age Pat deason Va ation Va ati	tors (2 or m d Leaves (BB) tems (B10) Water Table sible on Aer Position (D2 tard (D3) Test (D5) tounds (D6) Hummocks	ore required) 39) (MLRA 1, 2, (C2) ial Imagery (C9)

Projection. Di a co	City/County: McKinleyville sampling Date: 811/20
Applicant/Owner:	State: CA Sampling Point: W377 W
Investigator(s): M. Schwarz, H. McDonald	Section Township Range:
Londform (hillstone houses state) \$1.00	Local relief (concave, convex, none): Concave Slope (%): 540
Subsection (ADD).	Long: Datum:
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of ye	
Are Vegetation, Soil, or Hydrology significantly	
Are Vegetation, Soil, or Hydrology naturally pro	
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
The state of the s	
VEGETATION – Use scientific names of plants.	
Absolute Tree Stratum (Plot size:) % Cover	Speciac? Status
1	i fulliber of Dollintant Opecies
2.	
3.	
4	
	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size: 1. Sal \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Prevalence Index worksheet:
2. Rubus ursinus 5	Total % Cover of: Multiply by:
3	OBL species x 1 =
4.	FACW species x 2 =
5	rac species x 3 =
*1	= Total Cover
Herb Stratum (Plot size:	UPL species x5 =
1. Juneus hesperus 25	
2. Lotus corniculatus 3. Banunculus repens 20	Prevalence Index = B/A =
4. Agrostis Stolonifer 2 20	Hydrophytic Vegetation Indicators:
5. Hypochaeris radicata ?	_ Taple rest for Tryatophytic vegetation
6.	
7	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	
10	
11	¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	= Total Cover be present, unless disturbed or problematic.
	*
1	Hydrophytic Vegetation
	= Total Cover Present? Yes No
% Bare Ground in Herb Stratum	
Remarks: Passes Dominance test, p.	asses FAC-Weutral
5ft from wetland boun	Jarres
	9

DIL			trans-			2/1/		Sampling Point: <u>W3-</u>
rofile Description: (the dep				or confirm	the absence of	Indicators.)
DepthColor inches)Color	Matrix (moist)	%	Color (moist)	Features %	Type ¹	Loc ²	Texture	Remarks
)-3 1048		100	- COIGI (IIIOISI)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Loun	AGIIGINA
			7 540 1/1	_				
3-17 104R	1/2	95	7.542 4/6	<u>~</u>		<u>m</u>	Loam	
———								,
	1				-	-		
F	- D DI-	- DAA		-		-1010		
Type: C=Concentration lydric Soil Indicators						ed Sand Gr	ains. Local	tion: PL=Pore Lining, M=Matrix. for Problematic Hydric Solis ³ :
Histosol (A1)	, (1-1-p)		Sandy Redox (S		,			Muck (A10)
Histic Epipedon (A	2)		Stripped Matrix (arent Material (TF2)
Black Histic (A3)	,		Loamy Mucky M		l) (excep	t MLRA 1)		Shallow Dark Surface (TF12)
Hydrogen Sulfide ((A4)		Loamy Gleyed M			.,		(Explain in Remarks)
Depleted Below Da	ark Surface	(A11)	Depleted Matrix	(F3)				
_ Thick Dark Surface			Redox Dark Surf					of hydrophytic vegetation and
_ Sandy Mucky Mine			Depleted Dark S		7)			I hydrology must be present,
_ Sandy Gleyed Mal			Redox Depressi	ons (F8)			unless	disturbed or problematic
anteletium I mune III a	resent):			•				
							1	
Туре:								L-
Type: Depth (inches)							Hydric Soil P	resent? Yes No
Type: Depth (inches) Remarks: YDROLOGY		4		,			Hydric Soil P	resent? Yes No 🟃
Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrology In	ndicators:			,				
Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrology In	ndicators:	e required					Second	ary Indicators (2 or more required)
Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrology Indicators (min Surface Water (A1)	ndicators: nimum of on	t e requirec	Water-Stair	ned Leave		except	Second	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2,
Type:	ndicators: nimum of on	ne required	Water-Stain MLRA 1	ned Leave I, 2, 4A, a		except	Second Wa	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2,
Type: Depth (inches) Remarks: YDROLOGY Vetland Hydrology In Surface Water (A1 High Water Table Saturation (A3)	ndicators: nimum of on	ne required	Water-Stain MLRA 1 Salt Crust (ned Leave I, 2, 4A, a (B11)	and 4B)	except	Second Wa	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10)
Type: Depth (inches) Remarks: YDROLOGY Vetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1)	ndicators: nimum of on l) (A2)	ne required	Water-Stain MLRA 1 Salt Crust (Aquatic Inv	ned Leave I, 2, 4A, a (B11) rertebrate	and 4B) s (B13)	except	Second Wa Đra Đra	ary indicators (2 or more required) ter-Slained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2)
Type: Depth (inches) Remarks: YDROLOGY Vetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits	ndicators: nimum of on l) (A2) s (B2)	ne required	Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc	and 4B) es (B13) dor (C1)		Second Wa Dra Dry Sat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9
Type:	ndicators: nimum of on (A2)	e required	Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R	ned Leave I, 2, 4A, a (B11) rentebrate Sutfide Oc hizosphe	and 4B) s (B13) dor (C1) res along	J Living Roo	Second Wa Dra Dry Sat	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 proorphic Position (D2) **Table (C2)
Type:	ndicators: nimum of on (A2) s (B2)	e required	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence 0	ned Leave I, 2, 4A, a (B11) rertebrate Suffide Oc hizosphe of Reduce	and 4B) s (B13) dor (C1) res along ed Iron (C	g Living Roo (24)	Second Wa Dra Dry Sat Ots (C3) — Gee	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2)+//5 (La 2) allow Aquitard (D3)
Type:	ndicators: nimum of on 1) (A2) s (B2)	ne required	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o	ned Leave I, 2, 4A, a (B11) rertebrate Suffide Oc hizosphe I Reduce	and 4B) s (B13) dor (C1) res along ed Iron (C	g Living Roc (4) ed Soils (C6	Second Wa Dra Dry Sat Sts (C3) Gee She She	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) CNeutral Test (D5)
Type:	ndicators: nimum of on (A2) s (B2) (B4)		Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence of Recent Iror Stunted or	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizosphe of Reducti Stressed	s (B13) dor (C1) res along d Iron (C on in Till Plants (I	g Living Roo (24)	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Type:	ndicators: nimum of on (A2) s (B2) (B4) ks (B6) on Aerial In	падегу (В	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence of Recent Iror Stunted or Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizosphe of Reducti Stressed	s (B13) dor (C1) res along d Iron (C on in Till Plants (I	g Living Roc (4) ed Soils (C6	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) CNeutral Test (D5)
Type:	ndicators: nimum of on (A2) s (B2) (B4) ks (B6) on Aerial In	падегу (В	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence of Recent Iror Stunted or Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizosphe of Reducti Stressed	s (B13) dor (C1) res along d Iron (C on in Till Plants (I	g Living Roc (4) ed Soils (C6	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Type:	ndicators: nimum of on (A2) s (B2) (B4) cs (B6) on Aerial In ed Concave	nagery (B Surface (Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent fror Stunted or Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizosphe of Reduce n Reducti Stressed Iain in Re	s (B13) dor (C1) res along d Iron (C on in Till Plants (I	g Living Roc (4) ed Soils (C6	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Type:	ndicators: nimum of on (A2) s (B2) (B4) on Aerial In ed Concave	nagery (B Surface (Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence o Recent fror Stunted or Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizospher of Reduce in Reducti Stressed Iain in Re	and 4B) s (B13) dor (C1) res along ed Iron (C on in Till Plants (i	g Living Roc 24) ed Soils (C6 D1) (LRR A	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Type:	ndicators: nimum of on (A2) s (B2) (B4) on Aerial In ed Concave	nagery (B Surface (Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence o Recent fror Stunted or Other (Exp	ned Leave I, 2, 4A, a (B11) rertebrate Sulfide Oc hizospher of Reduce in Reducti Stressed Iain in Re	and 4B) s (B13) dor (C1) res along ed Iron (C on in Till Plants (i	g Living Roc 24) ed Soils (C6 D1) (LRR A	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 promorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Craci Inundation Visibie	s (B2) (B4) cs (B6) on Aerial Ined Concave	nagery (B Surface (eses	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence o Recent fror Stunted or Other (Exp	ned Leave 1, 2, 4A, a (B11) rertebrate Sulfide Oct hizosphe of Reduce of Reduce of Reducti Stressed lain in Re	and 4B) is (B13) dor (C1) res along ed Iron (C on in Till Plants (I emarks)	g Living Roc 24) ed Soils (C6 D1) (LRR A	Second Wa Dra Dry Sat Sha Sha FA(Rai	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 prorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Craci Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Saturation Present?	s (B2) (B4) cs (B6) ch Aerial Intel Concave t? Ye Ye	nagery (Bi Surface (es es	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (Inc No Depth (Inc	ned Leave, 1, 2, 4A, a (B11) rertebrate Sulfide Ochizosphe of Reduce on Reducti Stressed Iain in Re ches) ches):	and 4B) s (B13) dor (C1) res along ed Iron (C on in Till Plants (I emarks)	g Living Roc (4) ed Soils (C6 D1) (LRR A	Second Wa Dra Dry Sat Sts (C3) — Gee Sha FA() — Fro	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 prorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Type: Depth (inches) Remarks: YDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Craci Inundation Visible Sparsely Vegetate Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fring	s (B2) (B4) cs (B6) ch Aerial Intel Concave t? Ye Ye	nagery (Bi Surface (es es	Water-Stair MLRA 1 Salt Crust (Aquatic Inv Hydrogen 5 Oxidized R Presence of Recent Iror Stunted or Other (Exp B8) No Depth (Inc No Depth (Inc	ned Leave, 1, 2, 4A, a (B11) rertebrate Sulfide Ochizosphe of Reduce on Reducti Stressed Iain in Re ches) ches):	and 4B) s (B13) dor (C1) res along ed Iron (C on in Till Plants (I emarks)	g Living Roc (4) ed Soils (C6 D1) (LRR A	Second Wa Dra Dry Sat Sts (C3) — Gee Sha FA() — Fro	ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 prorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

cant/Owner:			State: CA Sampling Point: LUTT
tigator(s): M. Schwacz, 14. Mcc			
form (hillslope, terrace, etc.): Swale		Local relief (concave,	convex, none): Concave Slope (%): 5-
egion (LRR): _A	Lat:		Long: Datum:
Map Unit Name:			NWI classification:
climatic / hydrologic conditions on the site typical for	this time of ye	ar? Yes No _	(if no, explain in Remarks.)
/egetation, Soil, or Hydrology	significantly	disturbed? Are	"Normal Circumstances" present? Yes No
/egetation, Soil, or Hydrology	naturally pro	blematic? (If no	eeded, explain any answers in Remarks.)
MMARY OF FINDINGS – Attach site ma	ap showing	sampling point I	ocations, transects, important features, et
drophytic Vegetation Present? Yes	No V		,
dric Soil Present? Yes	No_V	Is the Sampled	
etland Hydrology Present? Yes	No_V	within a Wetla	nd? Yes No
GETATION - Use scientific names of p	Absolute	Dominant Indicator	Dominance Test worksheet:
ee Stratum (Plot size:)			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata:
pling/Shrub Stratum (Plot size:)		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)
RIAUS USSINUS	30	Y FACI)	Prevalence Index worksheet:
			Total % Cover of: Multiply by:
			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 = FACU species x 4 =
orb Stratum (Blat size: 1m²	36	= Total Cover	UPL species x5 =
Hypochaers radicata	is	Y ENW	Column Totals: (A) (B)
10 tos corniculatus	8	FAC	
Agrostis stolonifera	26	YEAC	Prevalence Index = B/A =
Holcus lanatus	13	FAC	1 - Rapid Test for Hydrophytic Vegetation
Anthoxanthum odorate	m5	<u>CAW</u>	N 2 - Dominance Test is >50%
			3 - Prevalence Index is ≤3.0¹
			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
1			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Voody Vine Stratum (Plot size:)		= Total Cover	
			Hydrophytic Vegetation
		= Total Cover	Present? Yes No
6 Bare Ground in Herb Stratum \		- I DIGI COVGI	

OIL						8 /11/2	o Mc	•	pling Point: 4/	
Profile Description: (De	escribe to	the dep	th needed to do	cument the i	ndicator	or confirm	the absence	of indicators	.)	
	Matrix			dox Features						
inches) Color (m		%	Color (moist)		Type	Loc2	<u>Texture</u>		Remarks	`
)-Z 104 R3	12	90	7.54R 4/6	<u>_ (U</u>		m	Loam	From	Compacti	iva
1-15 104 R	3/2	100					Lour		- 1	•
, , , , ,	/									-
								-		
ype: C=Concentration	, D=Deple	tion, RM=	Reduced Matrix,	CS=Covered	or Coate	d Sand Gra	ins. ² Loc	ation: PL=Po	re Lining, M=Matri	x.
ydric Soil Indicators:	(Applical	ole to all	LRRs, unless ot	herwise note	ed.)	•			matic Hydric Soil	
Histosol (A1)			Sandy Redox	x (\$5)			2 cm	Muck (A10)		
Histic Epipedon (A2))		Stripped Mat					Parent Materi	al (TF2)	
Black Histic (A3)				y Mineral (F1) (except	MLRA 1)			Surface (TF12)	
Hydrogen Sulfide (A	4)		Loamy Gleye	ed Matrix (F2))		Othe	er (Explain in I	Remarks)	
Depleted Below Dark	k Surface	(A11)	Depleted Ma	trix (F3)						
_ Thick Dark Surface (•		Redox Dark						tic vegetation and	
Sandy Mucky Minera				rk Surface (F	7)				must be present,	
_ Sandy Gleyed Matrix			Redox Depre	essions (F8)			unless	s disturbed or	problematic.	
estrictive Layer (if pre	esent):									
Type:										۲
Depth (inches):							Hydric Soil	Present? \	es No	9
emarks:								,		
DROLOGY										
DROLOGY etland Hydrology Indi			di about all block a				,,,	,		
'DROLOGY etland Hydrology Indi		e required					Secon	dary Indicator	s (2 or more requi	
DROLOGY etland Hydrology Inditimary Indicators (minim Surface Water (A1)	num of on	e required	Water-S	Stained Leave		xcept	Secon	dary Indicator	eaves (B9) (MLR	
DROLOGY etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A	num of on	e required	Water-S	Stained Leave RA 1, 2, 4A, a		xcept	Secon	dary Indicator ater-Stained I 4A, and 4B)	eaves (B9) (MLR	
DROLOGY etland Hydrology Indi imary Indicators (minim _ Surface Water (A1) _ High Water Table (A _ Saturation (A3)	num of on	e required	Water-S MLR Salt Cru	Stained Leave RA 1, 2, 4A, a ust (B11)	nd 4B)	xcept	<u>Secon</u> W Dr	dary Indicator ater-Stained I 4A, and 4B) rainage Patter	eaves (B9) (MLR	
DROLOGY etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1)	num of one	e required	Water-S MLR Salt Cru Aquatic	Stained Leave RA 1, 2, 4A, a ust (B11) Invertebrates	and 4B) s (B13)	xcept	Secon W	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa	Leaves (B9) (MLR ms (B10) ater Table (C2)	A 1, 2
etland Hydrology Indi imary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (num of one	e required	Water-S MLR Salt Cru Aquatic Hydrogo	Stained Leave RA 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od	s (B13) for (C1)		Secon W Di Di Si	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib	eaves (B9) (MLR ms (B10) iter Table (C2) ile on Aerial Image	A 1, 2
etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	num of one (S2)	e required	Water-S MLR Salt Cru Aquatic Hydrogu Oxidize	Stained Leave A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher	s (B13) for (C1) res along	Living Root	Secon W Di Di Si s (C3) Gi	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2)	A 1, 2
etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (Drift Deposits (B3) Algal Mat or Crust (B	num of one (S2)	e required	Water-S MLR Salt Cru Aquatic Hydrogo Oxidize Preseno	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrate: en Sulfide Od d Rhizospher ce of Reduce	s (B13) for (C1) res along d Iron (C4	Living Root	Secon W Di Secon Given:	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar	Leaves (B9) (MLR ms (B10) hter Table (C2) he on Aerial Image sition (D2) d (D3)	A 1, 2
etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	num of one (82) (82)	e required	Water-S MLR Salt Cru Aquatic Hydrogo Oxidize Present Recent	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction	s (B13) for (C1) res along d Iron (C4 on in Tilled	Living Root i) d Soils (C6)	<u>Secon</u> W Di Di Si Si Si F	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te	Leaves (B9) (MLR ms (B10) hter Table (C2) he on Aerial Image sition (D2) d (D3) st (D5)	A 1, 2
etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks	(B2) (B4) (B6)		Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Stunted	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tiller Plants (D	Living Root i) d Soils (C6)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR rns (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A)	A 1, 2
etland Hydrology Indi imary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or	(B2) (B4) (B6) (B6)	agery (B	Water-S MLR Salt Cru Aquatic Hydroge Oxidize Present Stunted 7) Other (8)	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tiller Plants (D	Living Root i) d Soils (C6)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) hter Table (C2) he on Aerial Image sition (D2) d (D3) st (D5)	A 1, 2
etland Hydrology Indi imary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated	(B2) (B4) (B6) (B6)	agery (B	Water-S MLR Salt Cru Aquatic Hydroge Oxidize Present Stunted 7) Other (8)	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction	s (B13) dor (C1) res along d Iron (C4 on in Tiller Plants (D	Living Root i) d Soils (C6)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR rns (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A)	A 1, 2
retland Hydrology Indictimary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated	(B2) (B2) (B6) n Aerial Im Concave	nagery (Bi Surface (B	Water-S MLR Salt Cru Aquatic Hydrogo Oxidize Present Recent Stunted T) Other (1	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction I or Stressed Explain in Red	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) d Soils (C6)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR rns (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A)	A 1, 2
/DROLOGY /etland Hydrology Indirimary Indicators (minimum Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B) Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B1)	(B2) (B2) (B6) n Aerial Im Concave	nagery (Bi Surface (B	Water-S MLR Salt Cru Aquatic Hydroge Oxidize Present Stunted 7) Other (8)	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction I or Stressed Explain in Red	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) d Soils (C6)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR rns (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A)	A 1, 2
/DROLOGY /etland Hydrology Indi rimary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated field Observations: urface Water Present?	(B2) (B6) n Aerial Im Concave	nagery (Bi Surface (B	Water-S MLR Salt Cru Aquatic Hydroge Present Recent Stunted 7) Other (files)	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction I or Stressed Explain in Red	s (B13) for (C1) res along d fron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po nallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR rns (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A)	A 1, 2
/DROLOGY /etland Hydrology Indi rimary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (Indicated Water Present? //ater Table Present?	(B2) (B6) n Aerial Im Concave :	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogo Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reduction or Stressed Explain in Reduction	s (B13) for (C1) res along d fron (C4 on in Tiller Plants (D marks)	Living Root i) of Soils (C6) 1) (LRR A)	Secon W Di Di Si Si (C3) Ri Ri	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) her (D5) ends (D6) (LRR A) hermocks (D7)	A 1, 2
/DROLOGY /etland Hydrology Indi rimary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated of the Company of the	(B2) (B6) In Aerial Im Concave : Ye: Ye: Ye:	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reductio I or Stressed Explain in Red (inches): (inches):	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A) mmocks (D7)	A 1, 2
/DROLOGY /etland Hydrology Indi rimary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated of the Company of the	(B2) (B6) n Aerial Im Concave : Ye: Ye:	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reductio I or Stressed Explain in Red (inches): (inches):	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A) mmocks (D7)	A 1, 2
retland Hydrology Indirimary Indicators (minim Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B3) Algal Mat or Crust (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Water Present? Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Water Present? Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Water Present? Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5) Surface Soil Cracks Inundation Visible or Sparsely Vegetated (B4) Sediment Deposits (B5)	(B2) (B6) n Aerial Im Concave : Ye: Ye:	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reductio I or Stressed Explain in Red (inches): (inches):	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A) mmocks (D7)	A 1, 2
fetland Hydrology Indirimary Indicators (minimary I	(B2) (B6) n Aerial Im Concave : Ye: Ye:	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reductio I or Stressed Explain in Red (inches): (inches):	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A) mmocks (D7)	A 1, 2,
High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Visible or	(B2) (B6) n Aerial Im Concave : Ye: Ye:	nagery (B7 Surface (B s s	Water-S MLR Salt Cru Aquatic Hydrogi Oxidize Present Recent Stunted Other (I	Stained Leave (A 1, 2, 4A, a ust (B11) Invertebrates en Sulfide Od d Rhizospher ce of Reduce Iron Reductio I or Stressed Explain in Red (inches): (inches):	s (B13) for (C1) res along d Iron (C4 on in Tiller Plants (D marks)	Living Root i) f Soils (C6) 1) (LRR A)	Secon W Di	dary Indicator dater-Stained I 4A, and 4B) rainage Patter ry-Season Wa aturation Visib eomorphic Po hallow Aquitar AC-Neutral Te aised Ant Mou	Leaves (B9) (MLR ms (B10) her Table (C2) he on Aerial Image sition (D2) d (D3) st (D5) ends (D6) (LRR A) mmocks (D7)	A 1, 2,

Project/Site: Pierson		City/County: Ma	-Kinleyville Sampling Date: 8/11/20
Applicant/Owner:			State: (A Sampling Point: WUTT u
Investigator(s): M. Schwarz, H. McC	place	Section, Townshi	p, Range:
Landform (hillslope, terrace, etc.): Swale		Local relief (cond	cave, convex, none): CONCAVE Slope (%): 5-10
			Long: Datum:
Soil Map Unit Name:			NVI classification:
Are climatic / hydrologic conditions on the site typical for the		ar? Yes Y	
Are Vegetation, Soil, or Hydrology			Are "Normal Circumstances" present? Yes Y No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If needed, explain any answers in Remarks.)
	showing	sampling po	int locations, transects, important features, etc.
	No		
Hydric Soil Present? Yes	No		npled Area Vetland? Yes V No
Wetland Hydrology Present? Yes Remarks:	No	Within a v	vettatio: 168 V NO
VEGETATION – Use scientific names of pla	ints.		
	Absolute	Dominant Indic	ator Dominance Test worksheet:
Tree Stratum (Plot size:) 1		Species? Stat	Number of Dominant Openes /
2			Total Number of Dominant
3			Species Across All Strata: (B)
4.		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)
Sapling/Shrub Stratum (Plot size: 1m2)	100	V CAC	Prevalence Index worksheet:
1. Salix hookeriana	-10	YEAC	
2. Rubus ursinus		-A FE	OBL species x 1 =
3			FACW species x 2 =
4			FAC species x 3 =
5	- 50	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size:(\mathscr{2})			UPL species x 5 =
1. Juneus hesperius	45	Y FA	(B) Column Totals:
2. Acrostis stadorifers	20	AZ Y	Prevalence Index = B/A =
3. I otos carriculatus	30	47 FA	Hydrophytic Vegetation Indicators:
4. Holcus lanatus	4	ÇA	
5. Anthoxanthum oboration	ni	EA	2 - Dominance Test is >50%
6			3 - Prevalence Index is ≤3.01
7			4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants
10.			Problematic Hydrophytic Vegetation ¹ (Explain)
11.			¹ Indicators of hydric soil and wetland hydrology must
11.	100	= Total Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_ 10,8100001	
1			Hydrophytic
2.			Vegetation /
		= Total Cover	Present? Yes V No
% Bare Ground in Herb Stratum \(\)			
Remarks: 3ft from wetland edit FAC-Neutral.	ge. P.	asses C	dominance Test, Passes

SOIL					05/11/2		Sampling Point: W4-77
Profile Desc	cription: (Describe	to the dep	h needed to docum			the absence of	indicators.)
Depth	Matrix			x Features			
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	<u>Texture</u> _	Remarks
0-2	1048 2/2	90	759× 414	10 C	<u></u>	LOGM	
3-14	10482/1	85	7.54R 4/6	15	<u>m</u>		
	oncentration, D=Dep				ed Sand Gra		on: PL=Pore Lining, M=Matrix.
	Indicators: (Application	able to all					for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (\$				luck (A10)
	pipedon (A2)		Stripped Matrix	(S6) Mneral (F1) (excep	A 841 D A 41		rent Material (TF2) hallow Dark Surface (TF12)
_	istic (A3) en Sulfide (A4)		Loamy Gleyed I		ILMLKA I)		Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix			0.000 (Capitali III Nomalay
	ark Surface (A12)	• (• • •)	X Redox Dark Sur			3Indicators	of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark \$				hydrology must be present,
	Gleyed Matrix (S4)	à	Redox Depress	ions (F8)		unless d	isturbed or problematic.
Restrictive	Layer (if present):						
Type:							1.
Depth (in	ches):					Hydric Soil Pre	esent? Yes X No
HYDROLO	GY						
-	drology Indicators:						
Primary Indi	cators (minimum of o	ne required					ry Indicators (2 or more required)
	Water (A1)		The second second	ned Leaves (B9) (except		er-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A, and 4B)			A, and 4B)
Saturati			Salt Crust				nage Patterns (B10)
	flarks (B1)			vertebrates (B13)		_	Season Water Table (C2)
200 000 000	nt Deposits (B2)			Sulfide Odor (C1)	. I to to a Dece		ration Visible on Aerial Imagery (C9)
	posits (B3)			thizospheres along			morphic Position (D2)
	at or Crust (B4)			of Reduced Iron (C n Reduction in Tille			low Aquitard (D3) -Neutral Test (D5)
	posits (B5) Soil Cracks (B6)		_	Stressed Plants (I			ed Ant Mounds (D6) (LRR A)
	ion Visible on Aerial I	manery /Ri		oliesseo Flants (t Ilain in Remarks)) (LKK A)		t-Heave Hummocks (D7)
	y Vegetated Concave	1000 mm 1000 m		nam m remarks		_ 1103	terease ruminous (D7)
Field Obser		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Surface Wat		es	No <u>)</u> Depth (inc	ches):			
Water Table			4.0	ches):			
Saturation P			No P Depth (inc			and Hydrology P	resent? Yes_& No
(includes ca	pillary fringe)						
Describe Re	corded Data (stream	gauge, mo	imoring well, aerial j	motos, previous in	spections), I	n avanable:	
Remarks:	Ac. 7	sed as	M. Jan Cal	g temporal de			,
A SHITTING COMP.	Assumed 69	we at	My dere Soil	4 10/10/12/pl	nic ba	sition	
					-		

		DATA TOTAL		. 1 11		8112/2
Project/Site: Plecson Applicant/Owner:		City	County: MCK	inlequille	Sampling Da	ite: Oncre
Applicant/Owner:		11		State)	Sampling Po	oint: Long
Investinatorial MA Solat 12	57. 15 MG	Donald Sec	tion, Township, Rar	nge:		The second
Landform (hillstope, terrace, etc.):	SISTELLE	Loc	al relief (concave,	convex, none):Ca	care	Slope (%):
Subregion (LRR):A		Lat:		Long:		Datum:
Soil Map Unit Name:				NWI clas		
Are climatic / hydrologic conditions of	n the site typical fo	r this time of year?	Yes No _	(If no, explain	in Remarks.)	1
Are Vegetation, Soil,				Normal Circumstance	s" present? Yes	No
Are Vegetation, Soil,				eded, explain any an	swers in Remarks	5.)
SUMMARY OF FINDINGS -				ocations, transe	cts, importar	nt features, etc
Hydrophytic Vegetation Present?	Yes	No V	T AND A			
Hydric Soll Present?	Yes	No V	Is the Sampled		No	
Wetland Hydrology Present?	Yes	No V	within a Wetlan	iar res_	NO	
VEGETATION – Use scienti	ific names of p	lants.				100
Tree Stratum (Plot size:	,		ominant Indicator	Dominance Test w		
1				Number of Dominar That Are OBL, FAC		(A)
3				Total Number of Do Species Across All		3 (B)
4				Percent of Dominar That Are OBL, FAC	t Species	33% (A/B)
Sapling/Shrub Stratum (Plot size:	Im2			Prevalence Index		7.718 (40)
1. Rubus ur sinus		_65_			of: M	ultiply by:
2				OBL species		CANADA CA
3				FACW species		
4				FAC species		
5		75-7	otal Cover	FACU species	×4=	
Herb Stratum (Plot size: \\^2		6	otal Covel	UPL species	x 5 =	
1. Lotus cornici	Sofell	35	TEAC	Column Totals:	(A)	(B)
2. Holcus landt		-13 -	V FACT		dex = B/A =	
3. Anthoxanthu			TARCO	Hydrophytic Vege	tation Indicators	:
5					for Hydrophytic V	egetation
6				№2 - Dominance		
7.				3 - Prevalence		<u> </u>
8.				data in Rem	cal Adaptations (arks or on a sepa	Provide supporting arate sheet)
9.					n-Vascular Plants	
10				The state of the s	drophytic Vegeta	
11				¹ Indicators of hydric	soil and wetland	hydrology must
		1C = TO	otal Cover	be present, unless	disturbed or probl	ematic.
Woody Vine Stratum (Plot size:	Marine Company of the					
1	- × ·			Hydrophytic		,
2	71.2			Vegetation Present?	Yes N	· V
% Bare Ground in Herb Stratum	Ø	= T(
Remarks: Does not p	bass Dov	inance T	Test			
			7			

SOIL				8/12	120	Mc4	Sampling Poin	t. WSTI
Profile Description: (Describe to the d	epth needed to docur	nent the ir	ndicator					
Depth Matrix	Redo	x Features						
(inches) Cofor (moist) %	Color (moist)	%	Type ¹	Loc²	Texture	_	Remarks	
0-3 104 R 3 3 100					_604	<u>m</u>		
3-16 104R2/2595	7.548 4/6	5		m	loai	<u> </u>		
		-			-			
		_	_					
¹ Type: C=Concentration, D=Depletion, R				d Sand Gra			PL=Pore Lining,	
Hydric Soil Indicators: (Applicable to			d.)				roblematic Hyd	Iric Solls':
Histosol (A1)	Sandy Redox (S					2 cm Muck		
Histic Epipedon (A2)	Stripped Matrix	101	\	D. 4			Material (TF2)	TE40\
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky N Loamy Gleyed I			MLRA 1)			w Dark Surface (ain in Remarks)	(1112)
Depleted Below Dark Surface (A11)	Depleted Matrix					Outer (Expl	ant in Acidans)	
Thick Dark Surface (A12)	Redox Dark Sur	1.4			³Indi	cators of hy	drophytic vegeta	tion and
Sandy Mucky Mineral (S1)	Depleted Dark 5		7)				ology must be pr	
Sandy Gleyed Matrix (S4)	Redox Depress					-	oed or problema	
Restrictive Layer (if present):	· ·							-
Туре:								
Depth (inches):					Hydric	Soil Presen	t? Yes	_ No_ _
IYDROLOGY								
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one requ	red; check all that apple	y)			<u>s</u>		dicators (2 or mo	
Surface Water (A1)	Water-Stai	ined Leave	es (B9) (e)	cept		_ Water-St	ained Leaves (B	9) (MLRA 1, 2,
High Water Table (A2)	MLRA	1, 2, 4A, a	nd 4B)			4A, ar		
Saturation (A3)	Salt Crust	(B11)			_	_ Drainage	Patterns (B10)	
Water Marks (B1)	Aquatic Inv				_		on Water Table	
Sediment Deposits (B2)	Hydrogen				_		n Visible on Aeri	
Drift Deposits (B3)	Oxidized F	450			ts (C3) _		hic Position (D2))
Algal Mat or Crust (B4)	Presence				_		Aquitard (D3)	
Iron Deposits (B5)	Recent Iro						tral Test (D5)	
Surface Soil Cracks (B6)	Stunted or) (LRK A)) _		nt Mounds (D6)	
Inundation Visible on Aerial Imagery		olain in Rei	narks)		_	_ Frost-Hea	ive Hummocks ((עם,
Sparsely Vegetated Concave Surface Field Observations:	= (D0)							-
	No. 16 Donth (in	-h\.						
	No Y Depth (inc							
	No Depth (inc					lan. D	-10 V	N- 12
Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge,							nt? Yes	NoX
Describe Necolded Data (Stream gauge,	monitoring well, delidi	pilotos, pie	, vious ilis	Jecuoi13), 1	" available	•		
Remarks:								

Project/Site: Pro (SCC)	City	County: MJ4	inlequille	Sampling Date: 812120
Applicant/Owner:				Sampling Point: WSTL
Investigator(s): M. Schwarz, B. McD				
Landform (hillslope, terrace, etc.): Swale	Loc	cal relief (concave,	convex, none): <u>co</u> (100 Slope (%): 2-5
Subregion (LRR):				
Soil Map Unit Name:				ssification:
Are climatic / hydrologic conditions on the site typical for this	s time of year?	Yes No _	(If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology s	significantly dist	urbed? Are	Normal Circumstance	es" present? Yes V No
Are Vegetation, Soil, or Hydrology r			eded, explain any ar	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map			ocations, transe	ects, important features, etc.
Hydrophytic Vegetation Present? Yes N	lo			
Hydric Soil Present? Yes N	lo	Is the Sampled	Area	/_ No
Wetland Hydrology Present? Yes V	lo	within a Wetlan	id? tes_	V No
VEGETATION – Use scientific names of plan	nts.			
		ominant Indicator	Dominance Test v	vorksheet:
Tree Stratum (Plot size:) 1	% Cover S	pecies? Status	Number of Domina That Are OBL, FAC	
2. 3.			Total Number of Do Species Across All	A CONTRACTOR OF THE PROPERTY O
4			Percent of Dominar	nt Species
Sapling/Shrub Stratum (Plot size: 102			That Are OBL, FAC	
1. Rubus ursinus	30_	Y EACO	an are virtuelled	of # Abitiply by:
2				x1 =
3				x 2 =
4.				x3=
5	30 =	Fotal Cours		× 4 =
Herb Stratum (Plot size: Im		_, ,		x 5 =
1. Juncus hesperius	20_	Y FACW	Column Totals:	(A) (B)
2. Agrostis stolonifera	25_	YEAC	Prevalence In	dex = B/A =
3. Holcus lanatus	15_	EAC	Hydrophytic Vege	
4. Anthoxanthum charatum	- 4-	EACU	1 - Rapid Test	for Hydrophytic Vegetation
5. Lotus comiculatus	-12-	EAC	Y 2 - Dominance	
6.			3 - Prevalence	
7			4 - Morphologic	cal Adaptations ¹ (Provide supporting parks or on a separate sheet)
8.			5 - Wetland No	
9. 10.				drophytic Vegetation ¹ (Explain)
11			The state of the s	soil and wetland hydrology must
	79 =1	otal Cover		disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1			Hydrophytic	,
2			Vegetation Present?	Yes_ V No
% Bare Ground in Herb Stratum	=1	otal Cover		
Remarks: Passes Dominance T	Toch I	F-1 FCA	r-1 10. 14.7	
Tasks Daminarice 1	E24 DI	1707 FA	ic very a	N.
2ft from bandary	5			

SOIL						٤	11/1020	Mch Sampling Point: WS 11-W
Profile Desc	cription: (Describe	to the dept	h needed to docun	nent the in	dicator	or confirm		of indicators.)
Depth	Matrix		Redox	x Features				
(inches)	Color (moist)	_%	Color (moist)		Type ¹	Loc²	<u>Texture</u>	Remarks
0-4	104RZ/Z	85	104R 4/4	15		m	Loam	
4-14	10482/2	75	10412 4/4	25		m	Loum	
	,							
¹Type C=C	oncentration, D=Dep	letion RM=	Reduced Matrix, CS	=Covered	or Coate	d Sand Gra	ains ² l oc	cation PL=Pore Lining, M=Matrix,
	Indicators: (Applic					a cana on		ors for Problematic Hydric Solls ³ :
Histosol	15 15 5		Sandy Redox (S		•			n Muck (A18)
	pipedon (A2)	-	Stripped Matrix				-	Parent Material (TF2)
	istic (A3)		Loamy Mucky M		(except	MLRA 1)		y Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed N	Matrix (F2)			Othe	er (Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix	(2)				
	ark Surface (A12)	7	X Redox Dark Sur					rs of hydrophytic vegetation and
	Aucky Mineral (S1)	'-	Depleted Dark S		7)			nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress	ions (F8)			unles	s disturbed or problematic.
	Layer (if present):							
Type:		-						
Depth (in	ches):						Hydric Soil	Present? Yes Y No
HYDROLO	GY				_			
	drology Indicators:					_		
_	cators (minimum of o		check all that apply	ı)			Secon	ndary Indicators (2 or more required)
	Water (A1)		Water-Stai		s (B9) (e	rcent		Vater-Stained Leaves (B9) (MLRA 1, 2,
_	ater Table (A2)			1, 2, 4A, ar		noopt		4A, and 4B)
Saturati			Salt Crust		14 407		D	rainage Patterns (B10)
	larks (B1)		Aquatic Inv		(B13)			ry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen :					aturation Visible on Aerial Imagery (C9)
	posits (B3)					Living Root		eomorphic Position (D2) 5 cake
	at or Crust (B4)		Presence of					hallow Aquitard (D3)
	posits (B5)		Recent Iron					AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed F	Plants (D	1) (LRR A)		aised Ant Mounds (D6) (LRR A)
Inundati	on Visible on Aerial I	magery (B7				,		rost-Heave Hummocks (D7)
Sparsely	y Vegetated Concave	Surface (B	8)					
Field Obser	vations:							
Surface Wat	er Present? Y	es N	loY Depth (inc	thes)		_		
Water Table			lo Y Depth (inc					
Saturation P			lo X Depth (inc			1	and Hydrolog	y Present? Yes No
(includes ca	pillary fringe)_							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Describe Re	corded Data (stream	gauge, moi	nitoring well, aerial p	hotos, pre	vious ins	pections), i	if available:	
Remarks:						_		
	Ascurat ba	k an	hydric Soil	+ +0	Pagran	hcI	osition	
	HIJUMAJ 50	٠.,	1	• 1	ן ייכו	[

Project/Site: Presson	City/C	county: Mchi	interville	Sampling Date: 8/1	2170
Applicant/Owner:			State: CA	Sampling Point: 65	TZUF
Investigator(s): M. Schwarz, H. McDan	31d Section	on, Township, Rar	nge:		-
Landform (hillslope, terrace, etc.): Swale	Loca	I relief (concave, o	convex. none): COOC	AVE. Slope (%):	5-10
Subregion (LRR): A	Lat:		Long:	Datum:	
Soil Map Unit Name:				cation:	
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology s	17.5			present? Yes N	
Are Vegetation, Soil, or Hydrology n			eded, explain any answe		
SUMMARY OF FINDINGS - Attach site map					s, etc.
Hydrophytic Vegetation Present? Yes N				,	
Hydric Soil Present? Yes N		Is the Sampled within a Wetlan	Area	No/_	
Wetland Hydrology Present? Yes N Remarks:	0	Within a Wetlan	165		
VEGETATION – Use scientific names of plan	MATERIAL STATE OF THE STATE OF	ninant Indicator	Dominance Test worl	ve hoot	
Tree Stratum (Plot size:)	% Cover Spe		Number of Dominant S		
1.			That Are OBL, FACW,		(A)
2			Total Number of Domin	nant	
3			Species Across All Stra	ata:	(B)
4	= To	tal Cover	Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: _\m^2\) 1. _\RUBUS _\WSINUS	60	Y FACU	Prevalence Index wo	rksheet:	
2		the state of the s	Total % Cover of:	Multiply by:	===
3.			The state of the s	x 1 =	
4			Annual Park	x 2 =	
5.				x 3 =	
1 .	60 = To	tal Cover	I compared to the compared to	x 4 =	-
Herb Stratum (Plot size: _\m^\tau_\)	\		UPL species		— _(B)
1. Arthoxarthum odoratur		FACU	Column Totals:	(A)	(B)
2. Lotus corniculatus	10	FAC	Prevalence Inde		
3. Holcus lanatus		FAC	Hydrophytic Vegetat		
4				Hydrophytic Vegetation	
5. 6.			△ 2 - Dominance Te		
7			3 - Prevalence Inc	aex is \$3.0 Adaptations ¹ (Provide su	nnodina
8.			data in Remark	ks or on a separate sheet)
9			5 - Wetland Non-	Vascular Plants ¹	
10			Problematic Hydro	ophytic Vegetation ¹ (Expla	ain)
11.				oil and wetland hydrology	must
	50 = Tot	tal Cover	be present, unless dis	turbed or problematic.	
Woody Vine Stratum (Plot size:)					
1	-		Hydrophytic	1	
2			Vegetation Present? Y	es No \	
% Bare Ground in Herb Stratum	= Tot	al Cover			
Remarks: Obes not pass domin	nance -	test			
Sft from wettand ed	ge.				
	9				

Profile Dec	cription: (Describe	to the denti	n needed to doc	ument the ind	licator o		IE WO		Sampling Poin	
Depth	Matrix	to the depti		lox Features	ilcator o		the absence	e or maioe		
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc²	Texture		Remarks	
0-3	10483/2	100			_		1. ocus			
3-17	1048313	100					Loan			
2-1+	10117	<u> 101)</u> -					Court	-		· · · · · · · · · · · · · · · · · · ·
							-			
Type: C=C	Concentration, D=Dep	fetion, RM=F	Reduced Matrix, (CS=Covered o	r Coated	Sand Gra	ains. ² Lo	cation. Pl	=Pore Lining,	M=Matrix.
lydric Soil	Indicators: (Application	able to all L	RRs, unless oth	erwise noted	.)		Indicat	ors for Pro	oblematic Hyd	iric Soils³:
Histoso	3	_	Sandy Redox					m Muck (A		
	pipedon (A2)	-	Stripped Matr						laterial (TF2)	·TE 4 = 1
	listic (A3)	-		Mineral (F1)	(except I	MILRA 1)			Dark Surface ((11-12)
	en Sulfide (A4) ed Below Dark Surfac	- e (Δ11)	Loamy Gleye Depleted Mat	No. Court			_ 0	ner (Explaii	n in Remarks)	
	ark Surface (A12)	e (A11) _	Redox Dark S				3Indica	tors of hydr	ophytic vegeta	tion and
	Mucky Mineral (S1)	_		k Surface (F7)				V=	ogy must be pr	
	Gleyed Matrix (S4)	_	Redox Depre	ssions (F8)			unle	ss disturbe	d or problema	tic.
Restrictive	Layer (if present):								,	
70										
Type:										1
	nches):		_				Hydric So	il Present?	Yes	No 🗡
	·						Hydric So	il Present	Yes	No 🗡
Depth (ir	·						Hydric So	il Present	? Yes	No 🗡
Depth (ir	·		<u> </u>				Hydric So	il Present	? Yes	No 🗡
Depth (ir	·						Hydric So	il Present?	? Yes	No /
Depth (ir Remarks:	nches):	-					Hydric So	il Present?	? Yes	_ No /
Depth (in Remarks:	OGY						Hydric So	il Present	? Yes	No /
Depth (in Remarks: YDROLO Wetland Hy	OGY ydrology Indicators:		check all that ap	alv)						
Depth (in Remarks: YDROLO Vetland Hy Primary Ind	OGY vdrology Indicators:				(B9) (ex	cent	Seco	ondary Indi	cators (2 or mo	ore required)
Depth (ir Remarks: YDROLC Vetland Hy Primary Ind Surface	OGY vdrology Indicators: icators (minimum of o		Water-S	tained Leaves		cept	Seco	ondary Indi Water-Stai	cators (2 or mo	ore required)
Depth (ir Remarks: YDROLO Vetland Hy Primary Ind Surface High W	OGY vdrology Indicators:		Water-S MLR	tained Leaves A 1, 2, 4A, and		cept	Seco	ondary Indi Water-Stai 4A, and	cators (2 or mo ned Leaves (B	ore required)
Depth (in Permarks: YDROLO Vetland Hy Surface High W Saturat	OGY vdrology Indicators: icators (minimum of o water (A1) vater Table (A2) vion (A3)		Water-S MLR Salt Cru	tained Leaves A 1, 2, 4A, and	d 4B)	cept	Seco	ondary Indi Water-Stai 4A , and Drainage F	cators (2 or mo	ore required) 9) (MLRA 1,
Depth (in Remarks: YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I	OGY vdrology Indicators: icators (minimum of o e Water (A1) vater Table (A2) ion (A3) Marks (B1)		Water-S MLR Salt Cru Aquatic	tained Leaves A 1, 2, 4A, and st (B11)	d 4B) (B13)	cept	Sec.	ondary Indi Water-Stai 4A , and Drainage F Dry-Seaso	cators (2 or mo ned Leaves (B 1 4B) Patterns (B10) n Water Table	ore required) 9) (MLRA 1,
Depth (in Remarks: YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime	OGY vdrology Indicators: icators (minimum of o water (A1) vater Table (A2) vion (A3)		Water-S MLR Salt Cru: Aquatic Hydroge	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates ((B13) r (C1)		Sec.	ondary Indi Water-Stai 4A, and Drainage F Dry-Season Saturation	cators (2 or mo ned Leaves (B 1 4B) Patterns (B10)	ore required) 9) (MLRA 1, (C2) at Imagery (C
Primary Ind Surface High W Saturat Water I Sedime Drift De	orches):		Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (n Sulfide Odol	d 48) (B13) r (C1) s along L	iving Roo	Seco	ondary Indi Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorph	cators (2 or mo ned Leaves (8 1 48) Patterns (810) n Water Table Visible on Aeri	ore required) 9) (MLRA 1, (C2) at Imagery (C
YDROLO Yetland Hy Surface High W Saturat Water I Sedime Drift De Algal M	orches): OGY vdrology Indicators: icators (minimum of o e Water (A1) vater Table (A2) icion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-S MLR. Salt Cru Aquatic Hydroge Oxidized	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (n Sulfide Odol I Rhizospheres	d 4B) (B13) r (C1) s along L Iron (C4)	iving Roo	Seco	ondary Indi Water-Stai 4A, and Drainage F Dry-Season Saturation Geomorphi Shallow Ad	cators (2 or mo ned Leaves (B 1 4B) Patterns (B10) In Water Table Visible on Aen ic Position (D2	ore required) 9) (MLRA 1, (C2) at Imagery (C
YDROLO Vetland Hy Surface High W Saturat Water I Sedime Drift De Algal M Iron De	orches): OGY vdrology Indicators: icators (minimum of o e Water (A1) vlater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4)		Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odol I Rhizospheres e of Reduced	d 4B) (B13) r (C1) s along L Iron (C4) in Tilled	iving Roo	Seco	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ag	cators (2 or moned Leaves (8) 1 4B) Patterns (810) In Water Table Visible on Aeri ic Position (D2) Juitard (D3)	(C2) at Imagery (C
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De	orches): OGY Verology Indicators: icators (minimum of	ne required;	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presenc Recent I	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced I ron Reduction	d 48) (B13) r (C1) s along L Iron (C4) in Tilled lants (D1	iving Roo	Second	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	cators (2 or moned Leaves (Bill 4B) Patterns (B10) In Water Table Visible on Aeric Position (D2) Juitard (D3) al Test (D5)	(C2) at Imagery (CLRR A)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundar	orches): OGY Identifications: Identifi	ne required;	Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced I ron Reduction or Stressed Pl	d 48) (B13) r (C1) s along L Iron (C4) in Tilled lants (D1	iving Roo	Second	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	cators (2 or moned Leaves (8/14B) Patterns (B10) In Water Table Visible on Aenic Position (D2) Iuitard (D3) Ial Test (D5)	(C2) at Imagery (CLRR A)
YDROLO Vetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse	orches): OGY vdrology Indicators: icators (minimum of o water (A1) vlater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial I	ne required;	Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced I ron Reduction or Stressed Pl	d 48) (B13) r (C1) s along L Iron (C4) in Tilled lants (D1	iving Roo	Second	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	cators (2 or moned Leaves (8/14B) Patterns (B10) In Water Table Visible on Aenic Position (D2) Iuitard (D3) Ial Test (D5)	(C2) at Imagery (CLRR A)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundai Sparse	orches): OGY vdrology Indicators: icators (minimum of o e Water (A1) vlater Table (A2) vlater Table (A2) vlater (B1) ent Deposits (B2) eposits (B3) vlat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial I ly Vegetated Concave rvations:	ne required; magery (B7) e Surface (B	Water-S MLR. Salt Cru Aquatic Hydroge Oxidized Presend Recent I Stunted Other (E	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced I ron Reduction or Stressed Pl	(B13) r (C1) s along L Iron (C4) in Tilled lants (D1 arks)	iving Roo Soils (C6) (LRR A)	Second	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	cators (2 or moned Leaves (8/14B) Patterns (B10) In Water Table Visible on Aenic Position (D2) Iuitard (D3) Ial Test (D5)	(C2) at Imagery (CLRR A)
Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundai Sparse	orches): OGY Verology Indicators: icators (minimum of of one Water (A1) Vater Table (A2) vion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vater Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial Ity Vegetated Concave revations: where Present?	magery (B7) e Surface (B	Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced i ron Reduction or Stressed Pl xplain in Remain	d 4B) (B13) r (C1) s along L lron (C4) in Tilled lants (D1 arks)	iving Roo Soils (C6) (LRR A)	Second	ondary Indi Water-Stai 4A, and Drainage F Dry-Seasor Saturation Geomorph Shallow Ad FAC-Neutr Raised Ant	cators (2 or moned Leaves (8/14B) Patterns (B10) In Water Table Visible on Aenic Position (D2) Iuitard (D3) Ial Test (D5)	(C2) at Imagery (CLRR A)
Pepth (in Remarks: YDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Algal M Iron De Surface Inundat Sparse Field Obse	pody vdrology Indicators: icators (minimum of o water (A1) vlater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (B6) tion Visible on Aerial I ly Vegetated Concave rvations: iter Present? y	magery (B7) e Surface (B	Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves A 1, 2, 4A, and st (B11) Invertebrates (in Sulfide Odor I Rhizospheres e of Reduced I ron Reduction or Stressed Pl xplain in Remainches):	d 4B) (B13) r (C1) s along L Iron (C4) in Tilled lants (D1 arks)	Soils (C6)	Seco	ondary Indi Water-Stai 4A, and Drainage F Dry-Seaso Saturation Geomorphi Shallow Ad FAC-Neutr Raised Ant Frost-Heav	cators (2 or moned Leaves (8/14B) Patterns (B10) In Water Table Visible on Aenic Position (D2) Iuitard (D3) Ial Test (D5)	(C2) at Imagery (CRR A) (LRR A)

Remarks:

Project/Site: Pierson		City/County: MCX	rioleraille s	Sampling Date: 61722
Applicant/Owner:		only county.	State: CA	Sampling Point: 1. 15 T2L
Investigator(s): M. Schwarz, 14. McDe	Llan			
Landform (hillslope, terrace, etc.): Swale				
Subregion (LRR): A				
Soil Map Unit Name:				tion:
Are climatic / hydrologic conditions on the site typical for the				,
Are Vegetation, Soil, or Hydrology				esent? Yes No
Are Vegetation, Soil, or Hydrology	naturally proi	blematic? (If n	eeded, explain any answers	in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point	locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes I	No		. 1	
	No	Is the Sampled within a Wetla		No
Wetland Hydrology Present? Yes ✓ I	No	Within a Wetta	101 103 <u>4</u>	
Remarks:				
VECETATION Has solvetific news of the	7.00			
VEGETATION – Use scientific names of plan	0.0000000000	B		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksh	
	.,		Number of Dominant Spe That Are OBL, FACW, or	
2			Total Number of Dominan	
3			Species Across All Strata:	1 2
4.			Percent of Dominant Spec	nino
Sapling/Shrub Stratum (Plot size: 1~~)	-	= Total Cover	That Are OBL, FACW, or	
1. Rubus usious	25	Y CACU	Prevalence Index works	heet:
2				Multiply by:
3			OBL species	
4.			FACW species	
5.			FAC species	
Harb Charles (District	25	= Total Cover	FACU species	
Herb Stratum (Plot size:) 1. Agrostis stolonifera	20	V CAC	UPL species	
2. Lotus corniculatus	- 20	TEAC	Column Totals.	(A) (B)
3. Juncus Nespecius	20	YEACL	Prevalence Index =	
4. Thorus ensifolius	5	FACU	Hydrophytic Vegetation	
5. Potentilla anserina	6	OBL	1 - Rapid Test for Hyd 2 - Dominance Test is	
6. Parentucellia viscosa	15	FAC	3 - Prevalence Index i	
7. Hypocharrisradicata	1	FACU		ptations ¹ (Provide supporting
8. Hoteus lanatus	_5_	FAC	data in Remarks of	r on a separate sheet)
9. Anthoxanthumodoratum		EACU	5 - Wetland Non-Vaso	
10			Problematic Hydrophy	
11			'Indicators of hydric soil ar be present, unless disturbe	nd wetland hydrology must
Woody Vine Stratum (Plot size:)	100	= Total Cover	or prosent, amess distance	ed or problematic.
1.			Understate	,
2.			Hydrophytic Vegetation	
% Bare Ground in Herb Stratum		= Total Cover	Present? Yes_	V No
Remarks: De				
Remarks: Passes dominance,		not pas	s fAC-Neutr	15
4ft from wetland e	dge.			

SOIL						2/12/	20 M	c4 S	Sampling Point: _	W) 1E-
Profile Desc	cription: (Describe	to the dep	th needed to	document the	indicator			e of indicat	ors.)	_
Depth	Matrix			Redox Feature	es					
(inches)	Color (moist)	%	Color (mois	st) %	Type	_Loc ²	<u>Texture</u>		Remarks	
0-)	10482/2	100	_				Loam			
3-14	104R3/2	80	7.54R 4	16 20	C	m	Loan			
l ———										
								-		-
1T 0-0			Dadward Mark			10-10-	-: 21	- Di-	Describing Ma	30-1-1-
	oncentration, D=Depletential					d Sand Gr			=Pore Lining, M= blematic Hydric	
Histosol		able to all	Sandy Re		iteu.)			m Muck (A1		Jolis .
	pipedon (A2)			Matrix (S6)				ed Parent Ma		
	istic (A3)			ucky Mineral (f	-1) (except	MLRA 1)			Dark Surface (TF	12)
	en Sulfide (A4)			eyed Matrix (F		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-		in Remarks)	,
	d Below Dark Surface	(A11)	-	Matrix (F3)	ŕ		_		-	
	ark Surface (A12)			rk Surface (F6	A.				phytic vegetation	
	Aucky Mineral (S1)			Dark Surface (gy must be prese	∍nt,
	Gleyed Matrix (S4)		Redox De	pressions (F8)		unle	ss disturbed	or problematic.	
	Layer (if present):									
	2 22									
Depth (in	ches):					_	Hydric So	il Present?	Yes	No
Remarks:										
1										
HYDROLO								-		
	drology Indicators:									
	cators (minimum of o	ne require							ators (2 or more	
	Water (A1)			er-Stained Lea	18.1	xcept	_		ed Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			LRA 1, 2, 4A,	and 4B)			4A, and	-	
Saturati				Crust (B11)	(= 4.0)				itterns (B10)	
Water N				atic Invertebrat				-	Water Table (C2	
	nt Deposits (B2)			ogen Sulfide (isible on Aerial I	
	posits (B3)						A 11 1351		Position (D2) 5	carb
	at or Crust (B4)			ence of Reduc				Shallow Agu		
	posits (B5)			ent Iron Reduc		and the second second		FAC-Neutra		an A)
	Soil Cracks (B6)	/B		ted or Stresse		1) (LRR A			Mounds (D6) (LR	
	on Visible on Aerial I			r (Explain in R	emarks)		_	Frost-Heave	Hummocks (D7)
Field Obser	y Vegetated Concave	Sunace (50)				_			
			N. V. D.	H- C11						
Surface Wat			No Y Dep							
Water Table			No Der							
Saturation P	resent? Y	es	No / Dep	oth (inches):		- Wetla	and Hydrolo	gy Present?	Yes <u>Y</u>	No
(includes ca Describe Re	corded Data (stream	gauge, mo	nitoring well, a	erial photos, r	revious ins	pections).	if available:			
- Control of the State of the S	•	G 3 G 5								
Remarks:			1 .							
	Assumed be	ist on	ng dric	Soil +	Topo som	phic p	BHIM			
-	1117-11-01		5.		, , ,	,				

	CHICAGO IN CHANGE SAMPLE SAMPLE BILLY CO
And Section 10	_ City/County: McKinleyville _ sampling Date: 8/12/20
Applicant/Owner:	State. On Sampling Form.
Investigator(s): 101. Schwarz, M. McCashala	_ Section, Township, Range
Landform (hillslope, terrace, etc.): Swave	_ Local relief (concave, convex, none): Stope (%):
Subregion (LRR): Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation, Soil, or Hydrology significant	
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Complet Area
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No	- William a victorial of the control
	te Dominant Indicator Dominance Test worksheet:
1	
3	
4	= Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 33°L (A/B)
Sapling/Shrub Stratum (Plot size: 1002) 1. Ruba Sur Sirus 45	Prevalence Index worksheet:
2	OBL species x 1 =
3	FACW species x 2 =
4	FAC species x 3 =
5	FACIL energies V.4 -
Herb Stratum (Plot size: \m²	= I DISI LOVEI
Herb Stratum (Plot size: 1m2) 1. Anthoxanthum oderatum 20	> Y FACU Column Totals: (A) (B)
2. Halcus lanatus 35	3 4 500
3. Lotus corniculatus 10	Prevalence Index = B/A =
4. Crepis capillaris 8	- FACU _ 1 - Rapid Test for Hydrophytic Vegetation
5. Parentucilia viscosa	2 - Dominance Test is >50%
6	
7	- 4 - Morphological Adaptations¹ (Provide supporting
8	data in Remarks or on a separate sheet)
9	
10	
11	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	= Total Cover be present, unless disturbed or problematic.
1	
2	Precent? Vac No.\/
% Bare Ground in Herb Stratum	_= Total Cover
Parado A C	. Does not pass Dominance test.

SOIL				8/12/2	1	McL	Sam	pling Point: W.	573-
Profile Desc	ription: (Describe t	o the depth n	eeded to document the in	dicator or o	onfirm (the absence			
Depth	<u>Matrix</u>		Redox Features						
(inches)	Color (moist)		Color (moist) %	Type' L	oc²	Texture		Remarks	
0-4	104 83/2	100_				Loan			
4-17	104 R 3/2.5	100_				Loan			
								-	
									
			duced Matrix, CS=Covered		and Gra			re Lining, M=Matr	
	735 m	ble to all LRI	Rs, unless otherwise note	d.)				natic Hydric Soi	s*:
Histosol	(A1) pipedon (A2)	_	Sandy Redox (\$5) Stripped Matrix (\$6)				m Muck (A10) d Parent Materi	al (TE2)	
	stic (A3)	_	Loamy Mucky Mineral (F1)	(except ML	RA 1)			Surface (TF12)	
	n Sulfide (A4)	_	Loamy Gleyed Matrix (F2)		,		ner (Explain in F		
Deplete	d Below Dark Surface	(A11)	Depleted Matrix (F3)						
	ark Surface (A12)	_	Redox Dark Surface (F6)					tic vegetation and	1
	flucky Mineral (S1)	_	Depleted Dark Surface (F7	7)				nust be present,	
	Bleyed Matrix (S4) Layer (if present):		Redox Depressions (F8)		I	unie	ss disturbed or	problematic.	
Type									
	ches):		-			Hydric Soi	i Present? Y	'es No	×
Remarks			<u> </u>			Tiyane doi	Trieseller 1		
INCIDIAL									
LIVEROLO	OV					-			
HYDROLO				_					
	drology Indicators:					_			
	cators (minimum of or	ie required; cr		700 D 7				s (2 or more requ	
	Water (A1)		Water-Stained Leave		pt	\		.eaves (B9) (MLR	A 1, 2,
Saturation	iter Table (A2)		MLRA 1, 2, 4A, au	10 46)			4A, and 4B)		
	larks (B1)		Salt Crust (B11) Aquatic Invertebrates	/R13)			Orainage Patter Ory-Season Wa		
	nt Deposits (B2)		Hydrogen Sulfide Od			S		le on Aerial Imag	ery (C9)
	posits (B3)		Oxidized Rhizosphere		na Roots				, (00)
	at or Crust (B4)		Presence of Reduced	_			Shallow Aquitan		
Iron Deg			Recent Iron Reductio		oils (C6)		AC-Neutral Te		
	Soil Cracks (B6)		Stunted or Stressed F					nds (D6) (LRR A)
inundati	on Visible on Aerial In	nagery (B7)	Other (Explain in Ren	narks)		_ F	rost-Heave Hu	mmocks (D7)	
Sparsely	/ Vegetated Concave	Surface (B8)							
Field Obser									
Surface Wat			Depth (inches):						
Water Table	Present? Ye	s No	Pepth (inches):						
Saturation P		s No	Example 2 Depth (inches):		Wetiar	nd Hydrolog	y Present?	res No	X
(includes car		pauge, monito	ring well, aerial photos, pre	vious inspec	tions) if	available:		_	/
		3	and trail agency business big						
Remarks:									
1									
1									

Project/Site: Piecson		City/County: Mr. 14	rinlewille Sampling Date: 8/17/20
		City/County. 1- (C1	State: CA Sampling Point: W5T3
Applicant/Owner	11	Destina Tamashia De	State. Or Surprise
Investigator(s): M. Schwarz, h. Michael	310	Section, Township, Ru	Slone (%): IC
Landform (hillslope, terrace, etc.): Standle		Local relief (concave,	convex, none): Concave Slope (%): 10-
			_ Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for th			(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	oblematic? (If n	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling point	locations, transects, important features, etc
Hydric Soil Present? Yes Yes Yes	No No	Is the Sample within a Wetla	The state of the s
Remarks:			
VEGETATION – Use scientific names of plan	nts.		
<u>Tree Stratum</u> (Plot size:) 1	% Cover	Dominant Indicator Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3			Total Number of Dominant Species Across All Strata: (B)
Sapling/Shrub Stratum (Plot size: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)
1. RUWS UTSIMUS	20	Y FACL	Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4			FACW species x 2 =
5			FACUl procise x 3 =
Herb Stratum (Plot size: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	20	= Total Cover	FACU species x 4 = UPL species x 5 =
1. Juncus Nesperius	15	Y FACE	
2 Tuncus la fanius	10	FACW	
3. Agrostis stobnifer a	30	Y FAC	Prevalence Index = B/A =
4. Lotus corniculatus	10	VEAC	Hydrophytic Vegetation Indicators:
5. Parentucellia viscosa	10	EAC	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Hypochaerisradicati		EACU	3 - Prevalence Index is ≤3.0¹
7. Plantage lanceolata	6	- FACU	4 - Morphological Adaptations¹ (Provide supporting
8. Holeus Panatus	-5	EAC	data in Remarks or on a separate sheet)
9. Anthoxanthum cooxatem	2	- FACU	5 - Wetland Non-Vascular Plants ¹
11		OBL	Problematic Hydrophytic Vegetation¹ (Explain)
	98	= Total Cover	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)			
1			Hydrophytic
			Vegetation Present? Yes
% Bare Ground in Herb Stratum 2		= Total Cover	
Pass FAC-Neutral.	lge.	Passes Do	minance Test. Does not

					9/12/20			Sampling Point: WST
	cription: (Describe	to the dep				or confirm	the absence of	indicators.)
epth (Matrix			x Feature		12	Tavina	Damada
inches)	Color (moist)	- %	Color (moist)	%_	Type'	<u>Loc²</u>	Texture _	Remarks
<u> </u>	104R2/2	100			. —		- Loam_	
5 - 14	10483/2	80	7.548414	05	(m	Loan	
			,1.					
			-		. ——			
	oncentration D=Dep					ed Sand Gra		on PL=Pore Lining, M=Matrix.
dric Soil	Indicators: (Applic	cable to all	LRRs, unless othe	rwise no	ted.)		Indicators	for Problematic Hydric Soils ³ :
Histoso	I (A1)		Sandy Redox (S5)			2 cm N	fluck (A10)
Histic E	pipedon (A2)		Stripped Matrix					arent Material (TF2)
-	istic (A3)		Loamy Mucky I		1001 1000 1000	t MLRA 1)		hallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed		2)		Other (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matrix					
	ark Surface (A12)		Redox Dark Su	(20) I.S.	•			of hydrophytic vegetation and
_	Mucky Mineral (\$1)		Depleted Dark					hydrology must be present.
	Gleyed Matrix (S4)		Redox Depress	sions (F8)			unless o	listurbed or problematic.
strictive	Layer (if present):							
Type								\ <u>\</u>
Depth (in	ches):						Hydric Soil Pr	esent? Yes No
DROLC	OGY drology Indicators	:						
etland Hy			d: check all that appl	ly)			Seconda	ary Indicators (2 or more required)
etland Hy imary Indi	drology Indicators				ves (B9) (e	except		*
etland Hy imary Indi Surface	drology Indicators cators (minimum of Water (A1)		Water-Sta			except	Wat	er-Stained Leaves (B9) (MLRA 1,
etland Hy imary Indi _ Surface _ High W	drology Indicators cators (minimum of Water (A1) ater Table (A2)		Water-Sta	ined Leav 1, 2, 4A,		except	Wat	er-Stained Leaves (B9) (MLRA 1 A, and 4B)
etland Hy imary Indi _ Surface _ High W _ Saturati	drology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3)		Water-Sta MLRA Salt Crust	ined Leav 1, 2, 4A, (B11)	and 48)	except	Wat Drai	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10)
etland Hy imary Indi Surface High W Saturati Water M	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)		Water-Sta MLRA Salt Crust Aquatic In	ined Leav 1, 2, 4A, (B11) vertebrate	and 4B) es (B13)	except	Wat Drai Dry-	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2)
etland Hy imary Indi Surface High W Saturati Water M Sedime	drology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide C	and 4B) es (B13) dor (C1)		Wat Drai Dry Satu	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) tration Visible on Aerial Imagery (
etland Hy imary Indi Surface High W Saturati Water M Sedime Drift De	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized i	ined Leavent 1, 2, 4A, (B11) vertebrate Sulfide C	and 4B) es (B13) dor (C1) eres along	Living Roo	Wate A Wa	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (morphic Position (D2)
etland Hy imary Indi Surface High W. Saturati Water N Sedime Drift De Algal M	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe of Reduc	and 4B) es (B13) edor (C1) eres along ed Iron (C	Living Roo 4)	Wate Drail Sature Sature Sha	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) tration Visible on Aerial Imagery (morphic Position (D2) \(\subseteq \omega_{\text{cal}}\eta\)
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etland Hy imary Indi Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	drology Indicators cators (minimum of of the Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavervations:	one required Imagery (B ve Surface (Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o T) Other (Ex	ined Leavent 1, 2, 4A, (B11) evertebrate Sulfide Carling of Reduction Reduct	es (B13) dor (C1) eres along ed Iron (Ci tion in Tille d Plants (Ci emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Wate A	er-Stained Leaves (B9) (MLRA 1, A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (rmorphic Position (D2) \$ \(\omega \)
etland Hy imary Indi Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel eld Obser	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (B ve Surface (Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o T) Other (Exp	ined Leavent 1, 2, 4A, (B11) evertebrate Sulfide C Rhizosphe of Reduction Reductor Stressed plain in R	and 4B) es (B13) ed (C1) eres along ed Iron (Cition in Tille d Plants (Cition in Tille	Living Roo 4) d Soils (C6 11) (LRR A)	Wate A	er-Stained Leaves (B9) (MLRA 1, A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (morphic Position (D2) \$\infty \text{Ual}\chi \text{ llow Aquitard (D3)} :-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
etland Hy imary Indi Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel eld Obser	drology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (B ve Surface (Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Irc Stunted o Other (Ex B8)	nined Leavent 1, 2, 4A, (B11) overtebrate Sulfide Con Reduction R	and 4B) es (B13) dor (C1) eres along ed Iron (C tion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4 Drai Satusts (C3) Sha Sha FACO Rais Fros	er-Stained Leaves (B9) (MLRA 1, A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (morphic Position (D2) \$ \(\omega\) (allow Aquitard (D3) E-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
etland Hy imary Indi Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel eld Obser urface Water Table	drology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavivations: ter Present?	Imagery (B ve Surface (Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o T) Other (Exp	nined Leavent 1, 2, 4A, (B11) overtebrate Sulfide Con Reduction R	and 4B) es (B13) dor (C1) eres along ed Iron (C tion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Wate 4 Drai Satusts (C3) Sha Sha FACO Rais Fros	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (rmorphic Position (D2) \(\sum_{\alpha} \) Illow Aquitard (D3) E-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
etland Hy imary Indi Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Iron De Inundat Sparsel ald Obser ater Table aturation F	rdrology Indicators cators (minimum of a Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) soil Cracks (B6) ion Visible on Aerial y Vegetated Concav rvations: ter Present?	Imagery (B ve Surface (Yes Yes		ined Lear 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in Reduct aches): aches)	es (B13) eldor (C1) eres along ed Iron (C lion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Wate A	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (morphic Position (D2) \$\infty \cdot \cdo
etland Hy imary Indi Surface High W Saturati Water M Sedime Drift De Algal M Iron De Iron De Inundat Sparsel Ird Observator Table Sturation Fedudes ca	drology Indicators cators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aerial y Vegetated Concavivations: ter Present?	Imagery (B ve Surface (Yes Yes		ined Lear 1, 2, 4A, (B11) vertebrate Sulfide C Rhizosphe of Reduct on Reduct r Stressed plain in Reduct aches): aches)	es (B13) eldor (C1) eres along ed Iron (C lion in Tille d Plants (C emarks)	Living Roo 4) d Soils (C6 1) (LRR A)	Wate A	er-Stained Leaves (B9) (MLRA 1 A, and 4B) nage Patterns (B10) Season Water Table (C2) uration Visible on Aerial Imagery (morphic Position (D2) S color llow Aquitard (D3) E-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

estigator(s): M. Schwarz, H. McCon; dform (hillslope, terrace, etc.): Swalz pregion (LRR): A I Map Unit Name: climatic / hydrologic conditions on the site typical for this	<u>618</u>	Section, Township, Ra	
oregion (LRR):			
region (LRR): 🔼		Local relief (concave,	comment contract class (04)
region (LRR): 🔼			convex, none). Toy ICAV C Slope (10).
Map Unit Name:			
			NWI classification:
			(If no, explain in Remarks.)
Vegetation, Soil, or Hydrology si	PROPERTY OF THE PARTY	100	"Normal Circumstances" present? Yes / No_
Vegetation, Soil, or Hydrology n.			eeded, explain any answers in Remarks.)
IMMARY OF FINDINGS – Attach site map s			
ydrophytic Vegetation Present? Yes No		sampling point	ocations, transcots, important reatures, e
ydric Soil Present? Yes No		Is the Sampled	I Area
/etland Hydrology Present? Yes No		within a Wetla	nd? Yes No
emarks:			
GETATION – Use scientific names of plan	Absolute		Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
			Total Number of Dominant Species Across All Strata:
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/
apling/Shrub Stratum (Plot size: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	40	Y ONCE	Prevalence Index worksheet:
Rubus spectabilis Rubus ixsinus	35	Y FACU	Total % Cover of: Multiply by:
Esses (X2)4100			OBL species x 1 =
	7		FACW species x 2 =
			FAC species x 3 =
	65	= Total Cover	FACU species x 4 =
lerb Stratum (Plot size:)		XI	UPL species x 5 =
. Holcus lanatus	35		Column Totals: (A) (B
Carex obnupt 7	2	CBL	Prevalence Index = B/A =
Anthoxanthum odoratum		FACU	Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
-			2 - Dominance Test is >50%
·			3 - Prevalence Index is ≤3.01
			4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
	-	THE ROLL S	5 - Wetland Non-Vascular Plants¹
0			Problematic Hydrophytic Vegetation¹ (Explain)
1			¹ Indicators of hydric soil and wetland hydrology must
	38	= Total Cover	be present, unless disturbed or problematic.
Noody Vine Stratum (Plot size:)			
			Hydrophytic
2.			Present? Yes No
% Bare Ground in Herb Stratum	-	= Total Cover	

Profile Description: (Descri	he to the dent	h needed to document the indicato		the absence	
Depth Matrix		Redox Features	or commi	the absence	or moreages.)
inches) Cofor (moist)		Color (moist) % Type¹	Loc²	Texture	Remarks
0-4 104313	[00]			Loam	1º 0.M.
1-8 104312	100			Loan	
1-11 1-11212					· · · · · · · · · · · · · · · · · · ·
104)/2.	<i>5 100</i>			Loam	
ype: C=Concentration, D=D	Depletion, RM=	Reduced Matrix, CS=Covered or Coa	ted Sand Gr	ains. ² Loc	cation: PL=Pore Lining, M=Matrix.
dric Soil Indicators: (App	olicable to all l	RRs, unless otherwise noted.)		Indicato	rs for Problematic Hydric Solls ³ :
_ Histosol (A1)		Sandy Redox (S5)			n Muck (A10)
_ Histic Epipedon (A2)		Stripped Matrix (S6)	80-000 Date - 10 - 10		Parent Material (TF2)
_ Black Histic (A3)		Loamy Mucky Mineral (F1) (exce	pt MLRA 1)		y Shallow Dark Surface (TF12)
_ Hydrogen Sulfide (A4)	fore (844)	Loamy Gleyed Matrix (F2)		Othe	er (Explain in Remarks)
 Depleted Below Dark Surface (A12) 		Depleted Matrix (F3) Redox Dark Surface (F6)		3Indicate	ors of hydrophytic vegetation and
Sandy Mucky Mineral (S1		Depleted Dark Surface (F7)			nd hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depressions (F8)			s disturbed or problematic.
estrictive Layer (if present					
Type:					
Depth (inches):				Hydric Soil	Present? Yes No 🔀
emarks:			_	Hydric Son	Plesent? Tes No
/DROLOGY				riyunc son	Plesdik? Tes No
YDROLOGY Vetland Hydrology Indicato	ors:				
YDROLOGY Vetland Hydrology Indicato Vrimary Indicators (minimum (ors:			Secon	ndary Indicators (2 or more required)
'DROLOGY /etland Hydrology Indicato rimary Indicators (minimum of _ Surface Water (A1)	ors:	Water-Stained Leaves (B9)	(except	Secon	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1,
'DROLOGY letland Hydrology Indicato rirnary Indicators (minimum of Surface Water (A1) High Water Table (A2)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B)	(except	Secon	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
POROLOGY Setland Hydrology Indicator Surface Water (A1) High Water Table (A2) Saturation (A3)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	(except	Secor W	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10)
POROLOGY Petland Hydrology Indicator rimary Indicators (minimum of a surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	(except	<u>Secor</u> W D D	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2)
POROLOGY Tetland Hydrology Indicator Timary Indicators (minimum of a surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		Secon W	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (C
retland Hydrology Indicatorimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon	g Living Roo	Secon W D D S ts (C3) G	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Coleomorphic Position (D2)
Petland Hydrology Indicatorimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C	g Living Roo C4)	Secon W D S ts (C3) S	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caeomorphic Position (D2) hallow Aquitard (D3)
POROLOGY Petland Hydrology Indicator Firmary Indicators (minimum of a surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ors:	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C) Recent Iron Reduction in Till	g Living Roo C4) led Soils (C6	Secon W D S ts (C3) G S) F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Company) Becomorphic Position (D2) Italiow Aquitard (D3) AC-Neutral Test (D5)
POROLOGY Petland Hydrology Indicatorimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	ors: of one required	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1)	g Living Roo C4) led Soils (C6	Secon W D S ts (C3) S S S S S S R	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ca) Becomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A)
Petland Hydrology Indicatorimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri	ors: of one required	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks)	g Living Roo C4) led Soils (C6	Secon W D S ts (C3) S S S S S S R	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Company) Becomorphic Position (D2) Italiow Aquitard (D3) AC-Neutral Test (D5)
retland Hydrology Indicatorimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeric	ors: of one required	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks)	g Living Roo C4) led Soils (C6	Secon W D S ts (C3) S S S S S S R	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ca) Becomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A)
retland Hydrology Indicator imary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeric Sparsely Vegetated Concleted Observations:	ors: of one required ial Imagery (B7 cave Surface (E	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks)	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D S ts (C3) S S S S S S R	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ca) Becomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicato rimary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conciletd Observations: urface Water Present?	ors: of one required ial Imagery (B7 cave Surface (E	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) No Depth (inches):	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D S ts (C3) S S S S S S R	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ca) Becomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicato /imary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conciletd Observations: urface Water Present? //ater Table Present?	ial Imagery (B7 cave Surface (E	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) ODEPTH (inches): Depth (inches):	g Living Roo C4) ed Soils (C6 D1) (LRR A)	Secon W D S ts (C3) G S F F F	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)
Vetland Hydrology Indicato virinary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Concileted Observations: surface Water Present? Vater Table Present?	ial Imagery (B7 cave Surface (E	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) No Depth (inches):	g Living Roo C4) ed Soils (C6 D1) (LRR A)	Secon W D S ts (C3) G S F F F	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irainage Patterns (B10) Iry-Season Water Table (C2) aturation Visible on Aerial Imagery (Ca) Becomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrology Indicator/ /etland Hydrology Indicator/ Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conciletd Observations: urface Water Present? //ater Table Present? aturation Present? includes capillary fringe)	ial Imagery (B7 cave Surface (B7 Yes N	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) ODEPTH (inches): Depth (inches):	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D Sts (C3) — G F R F and Hydrology	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)
/DROLOGY /etland Hydrology Indicato //etland Hydrology Indicator //etland Hydrology Indicator //example Indicators (minimum of the content of	ial Imagery (B7 cave Surface (B7 Yes N	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) Depth (inches): Depth (inches):	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D Sts (C3) — G F R F and Hydrology	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)
/DROLOGY /etland Hydrology Indicato //etland Hydrology Indicator //etland Hydrology Indicator //example Indicators (minimum of the content of	ial Imagery (B7 cave Surface (B7 Yes N	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) Depth (inches): Depth (inches):	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D Sts (C3) — G F R F and Hydrology	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Conditional Field Observations: Surface Water Present? Vater Table Present? Saturation Present? Saturation Present?	ial Imagery (B7 cave Surface (B7 Yes N	Water-Stained Leaves (B9) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres alon Presence of Reduced Iron (C1) Recent Iron Reduction in Till Stunted or Stressed Plants (C1) Other (Explain in Remarks) Depth (inches): Depth (inches):	g Living Roo C4) led Soils (C6 D1) (LRR A)	Secon W D Sts (C3) — G F R F and Hydrology	Indary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (Caleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

			sampling Date: 8/2/70
oplicant/Owner:			State: CA Sampling Point: L &TI L
vestigator(s): M. Schwarz, H. McD	blena	Section, Township, Ra	nge:
ndform (hillslope, terrace, etc.): Swale		Local relief (concave,	convex, none): Concave Slope (%): 10
bregion (LRR): A	Lat:		Long: Datum:
oil Map Unit Name:			NWI classification:
e climatic / hydrologic conditions on the site typical for th			(If no, explain in Remarks.)
e Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
			ocations, transects, important features, etc
	No		
	No	Is the Sampled	
	No	within a Wetlar	nd? Yes No
EGETATION – Use scientific names of plan	nts.		
Free Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
·	Contract of the last of the la		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
V			Total Number of Dominant Species Across All Strata: (B)
			(,
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:	. a		Prevalence Index worksheet:
RUPUSUS invis added to Hab			Total % Cover of: Multiply by:
because 45%			OBL species x 1 =
			FACW species x 2 =
			FAC species x 3 =
	0	= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m ²		N	UPL species x 5 =
Junius hesperius	12	FACW	Column Totals: (A) (B)
Tuncus butanius	20	Y FACW	Prevalence Index = B/A =
Lotus carriculatus	30	Y EAC	Hydrophytic Vegetation Indicators:
Agrestis stalonifera	-13	FAC	1 - Rapid Test for Hydrophytic Vegetation
Anthoxanthum dorstun	10	- FACU	✓ 2 - Dominance Test is >50%
Panyoculus repens	10	FAC	3 - Prevalence Index is ≤3.01
Rubus ursinus	2	FACU	 4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
			5 - Wetland Non-Vascular Plants¹
			Problematic Hydrophytic Vegetation ¹ (Explain)
			Indicators of hydric soil and wetland hydrology must
0			be present, unless disturbed or problematic.
0	100	= Total Cover	
1		= Total Cover	
10		= Total Cover	Hydrophytic
Noody Vine Stratum (Plot size:) 1			Hydrophytic Vegetation Present? Yes V
10		= Total Cover	Vegetation /

Depth (inches)	intion: (Describ		_		0	1476	mag			oint: _	40671-6
(inches)	ipuon. (Describ	e to the dep	th needed to docun	ent the in	dicator o	r confirm t	the absence of				
0-2	Matrix			<u>Features</u>	_ 1				_		
	104 R 2/2	16.0	Color (moist)	<u></u> _%	Type ¹	Loc ²	Texture /		Rema	rks	
	-11		7 -40 214				Loan				1 12 -
7-14	2.54 3/2	<u>80</u>	1.54R3/4	20			Loam	Some	rc	ol ep	btims T
Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, CS	=Covered	or Coated	Sand Grai		ation PL=Po			
Histosol (Histic Epi Black His Hydroger Depleted Thick Dal Sandy Mi	(A1) ipedon (A2) stic (A3) n Sulfide (A4) Below Dark Surfa rk Surface (A12) ucky Mineral (S1) leyed Matrix (S4)	ace (A11)	LRRs, unless other Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi	65) (S6) Iineral (F1) Matrix (F2) (F3) (F3) face (F6) Gurface (F7	(except l	MLRA 1)	2 cm Red l Very Othe ³ Indicator wetlan	s for Proble Muck (A10) Parent Mater Shallow Dar r (Explain in s of hydroph d hydrology disturbed or	ial (TF2 k Surfac Remark ytic veg must be	etation	2) and
	ayer (if present):					ł					
Type:										,	
Depth (inc	hes):						Hydric Soil F	resent?	Yes/	- '	No
	rology Indicators		d chock all that and	Α				Inne ledieur	ro /2		on tire all
		one require	d; check all that apply		/DO) /			dary Indicato			
Surface \ High \Mat	er Table (A2)		Water-Stai	ned Leave: i, 2, 4A, an		cept	vv	ater-Stained 4A, and 4B)		(RA) (M	ILKA 1, 2,
Saturatio			Salt Crust		46,		Dr	ainage Patte		וכ	
Water Ma			Aquatic Inv		(B13)			y-Season Wa			
Sedimen	t Deposits (B2)		Hydrogen	Sulfide Odd	or (C1)		- 1 - 1 -	turation Visit			
Drift Dep	osits (B3)		Oxidized R	hizosphere	s along L	iving Roots	(C3) <u>X</u> Ge	omorphic Po	sition (D2) S	wale
	or Crust (B4)		Presence of					allow Aquita			
Iron Depo	0 (0)		Recent Iron			350	V	C-Neutral Te			E 101
	Soil Cracks (B6) in Visible on Aeria	l Impens /D	Stunted or) (LRR A)		ised Ant Mo			(A)
mundang	Vegetated Conca			iain in Ren	iaiksj		FIG	st-Heave H	TLLILLIOCS	(S (D/)	
	7700	TO OBITBOO (-	
Sparsely		Yes	No Y Depth (inc	hes)							
Sparsely Field Observ	r Present?			ches)		_					
Sparsely Field Observ Surface Wate		Yes				_			1.0		
Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Present? esent? illary fringe)		No Y Depth (inc				nd Hydrology	Present?	Yes _X		No
Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Present? esent? illary fringe)	Yes			vious insp			Present?	Yes X		No
Sparsely Field Observ Surface Wate Water Table I Saturation Pro- includes cap Describe Rec	Present? esent? illary fringe)	Yes	No Y Depth (inc		vious insp			Present?	Yes <u>X</u>		No
Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Present? esent? illary fringe)	Yes	No Y Depth (inc		vious insp			Present?	Yes <u>X</u>		No
Sparsely Field Observ Surface Wate Water Table I Saturation Pro- includes cap Describe Rec	Present? esent? illary fringe)	Yes	No Y Depth (inc		vious insp			Present?	Yes <u>X</u>		No

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

licant/Owner:			Hinleyville Sampling Date: 8/12 State: CA Sampling Point: W67
estigator(s): M. Schwarz, W. Maron	1997 Se	ction, Township, Ra	ange:
dform (hillslope, terrace, etc.): Swale	L	ocal relief (concave,	convex, none): Cancave Slope (%):_
pregion (LRR):	Lat:		Long: Datum:
I Map Unit Name:			NWI classification:
climatic / hydrologic conditions on the site typical for	this time of year	? Yes V No_	(If no, explain in Remarks.)
Vegetation, Soil, or Hydrology			"Normal Circumstances" present? Yes V
e Vegetation, Soil, or Hydrology			eeded, explain any answers in Remarks.)
		ampling point i	locations, transects, important features,
lydrophytic Vegetation Present? Yes		Is the Sample	d Area
lydric Soil Present? Yes	No_V/	within a Wetlan	
Vetland Hydrology Present? Yes	No_V_		
ree Stratum (Plot size: 1m2). Alnus rubra (overhanging	% Cover S	Opminant Indicator Species? Status CAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:
			Total Number of Dominant Species Across All Strata: (E
	60 =	Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A
Sapling/Shrub Stratum (Plot size: \(\sqrt{m}^2 \)	CC	11 (45.1)	Prevalence Index worksheet:
Rubis ursinus		X EXCO	Total % Cover of: Multiply by:
			OBL species x 1 =
l			FACW species x 2 =
			FAC species x 3 =
		Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 1m²			UPL species x 5 =
Lotus corniculatus	-8	FAC	Column Totals: (A) (
2. Holcus langtus 2. Anthoxanthum adaratu		Y FAC	Prevalence Index = B/A =
· Agrostis stolonifera	and the same of th	FAC	Hydrophytic Vegetation Indicators:
0			1 - Rapid Test for Hydrophytic Vegetation
5 5			2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
7			4 - Morphological Adaptations¹ (Provide support
8			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants ¹
			Problematic Hydrophytic Vegetation¹ (Explain)
			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
10	110	AND DESCRIPTION OF THE PROPERTY OF THE PROPERT	25 present, uniosa disturbed of problematic.
11.	48 =	Total Cover	
10	48 =		Library dia .
10	<u>48 </u>		Hydrophytic Vegetation
10	<u>48</u> -		

SOIL		8/12/20	Moll	Sampling Point:	W6T2-
Profile Description: (Describe to the	depth needed to document the	indicator or confirm	the absence of	indicators.)	
Depth Matrix	Redox Feature	s			
(inches) Color (moist) %	Color (moist) %	Type Loc2	Texture	Remarks	
0-2 10482/2 10	<u> </u>		Loam		
2-8 104 Rz/z 100)		Loun		
2-15 104R3/2 19			Loan		
<u> </u>					
		· —— ——			
=					
True CoConnectories DeDoctories	PARTE durant Markin CC-Course	d as Control Sand Co		- Disposalizion M	-10-1-1
¹ Type: C=Concentration, D=Depletion, Hydric Soil Indicators: (Applicable to				on: PL=Pore Lining, M for Problematic Hydri	
Histosol (A1)	Sandy Redox (\$5)			uck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)			rent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F			nallow Dark Surface (T	F12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2	2)	Other (I	Explain in Remarks)	
Depleted Below Dark Surface (A11 Thick Dark Surface (A12)) Depleted Matrix (F3) Redox Dark Surface (F6)		3Indicators o	of hydrophytic vegetation	on and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F			hydrology must be pre	
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	•,		isturbed or problematic	
Restrictive Layer (if present):			1		
Туре:					
Depth (inches):	_		Hydric Soil Pre	esent? Yes	No X
Remarks:					
				_	
IYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one rec				ry Indicators (2 or more	
Surface Water (A1)	Water-Stained Leav	es (B9) (except		er-Stained Leaves (B9)	(MLRA 1, 2,
High Water Table (A2)	MLRA 1, 2, 4A,	and 4B)	4/	A, and 4B)	
Saturation (A3)	Salt Crust (B11)			rage Pattems (B10)	
Water Marks (B1)	Aquatic Invertebrate			Season Water Table (C	
Sediment Deposits (B2)	Hydrogen Sulfide O			ration Visible on Aerial	Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizosphe				
Algal Mat or Crust (B4)	Presence of Reduce	450 050		low Aquitard (D3)	
Iron Deposits (B5)	Recent Iron Reducti			-Neutral Test (D5)	essent six
Surface Soil Cracks (B6)	Stunted or Stressed			ed Ant Mounds (D6) (L	
 Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa 		marks)	Frost	l-Heave Hummocks (D	7)
Field Observations:	1				
Surface Water Present? Yes	No 🔀 Depth (inches):				
Water Table Present? Yes	No Depth (inches):				
Saturation Present? Yes (includes capillary fringe)	No bepth (inches):	Wetla	and Hydrology P	resent? Yes	No K
Describe Recorded Data (stream gauge	e, monitoring well, aerial photos, pr	evious inspections), i	if available:	= 1	
Damada			_	*	-
Remarks:					

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

			olegyille Sampling Date: 8/12/20
Applicant/Owner:			State: (A Sampling Point: W672we
Investigator(s): M. Schwarz, 14. McD			
the state of the s			convex, none): CONCAVE Slope (%): 1()
Subregion (LRR): A	Lat:		Long: Datum:
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site typical for	r this time of year	ar? Yes V No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed? Are "I	Normal Circumstances" present? Yes V No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site m	ap showing	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		Is the Sampled	Area (
Hydric Soil Present? Yes/_		within a Wetlan	Approximate the second of the
Wetland Hydrology Present? Yes	_ No	202000000000000000000000000000000000000	
Nemarks.			
VEGETATION – Use scientific names of p	olants.		
	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:
1			mat Are Obt., FACW, of FAC.
2			Total Number of Dominant Species Across All Strata: (B)
3			
		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 640 (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worksheet:
1. Rubus ur Jimus	<u> </u>	4 PACU	Total % Cover of: Multiply by:
2	_		OBL species x1 =
3			FACW species x 2 =
4			FAC species x 3 =
5			FACU species x 4 =
Herb Stratum (Plot size: \m^2	-0	= Total Cover	UPL species x 5 =
1. Tuncus hesperius	10	FACW	Column Totals: (A) (B)
2 Juneus ensifolius	5	FACW	Prevalence Index = B/A =
3. Agrostis stolonitera	55	Y FAC	Hydrophytic Vegetation Indicators:
4. Holas (2018+4)	20	Y PAC	1 - Rapid Test for Hydrophytic Vegetation
5. Juncus bufacijus	8	- FACW	2 - Dominance Test is >50%
6.		Established Control	3 - Prevalence Index is ≤3.01
7			4 - Morphological Adaptations¹ (Provide supporting
8.			data in Remarks or on a separate sheet)
9			5 - Wetland Non-Vascular Plants¹
10			Problematic Hydrophytic Vegetation¹ (Explain)
11			¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
	98	= Total Cover	bo present, arress distances a p
Woody Vine Stratum (Plot size:)			
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2		- Tatal Cause	Present? Yes V No
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estrictive Layer (if present)	•								
Tyrse									
Type;									
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Appendix C – Record of Climatological Observations 2020

Station: MCKINLEYVILLE 2.7 SE, CA US US1CAHM0004

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 09/06/2020

National Centers for Environmental Information 151 Patton Avenue Asheville, North Carolina 28801

Observation Time Temperature: Unknown Observation Time Precipitation: Unknown

Ctation. IV	Station: WCKINLET VILLE 2.7 SE, CA US US TCAHWOUU4 Generated on 09/06					on 09/06/2020												
				mperature (F)			Precipitation		<u> </u>	Evapo	ration			Soil Temp	erature (F)		
Υ	M	D	24 Hrs. E Observa	Ending at tion Time		24 Ho	ur Amou Observa	ints Ending tion Time	at	At Obs. Time	24 Hour			4 in. Depth			8 in. Depth	
e a r	n t h	a y	Max.	Min.	At Obs.	Rain, Melted Snow, Etc. (in)	F I a g	Snow, Ice Pellets, Hail (in)	F a g	Snow, Ice Pellets, Hail, Ice on Ground (in)	Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2020	07	01																
2020	07	02				0.00												
2020	07	03				0.00												
2020	07	04				0.00												
2020	07	05				0.00		0.0										
2020	07	06				0.00		0.0										
2020	07	07				0.00		0.0										
2020	07	08				0.00		0.0										
2020	07	09				0.00		0.0										
2020	07	10				0.00		0.0										
2020	07	11				Т												
2020	07	12				0.00		0.0										
2020	07	13				0.00												
2020	07	14				0.00												
2020	07	15				0.00												
2020	07	16				0.00		0.0										
2020	07	17				0.00		0.0										
2020	07	18				0.00												
2020	07	19				0.00		0.0										
2020	07	20				0.01												
2020	07	21				0.01												
2020	07	22				0.00		0.0										
2020	07	23				0.02												
2020	07	24				0.00												
2020	07	25				0.00												
2020	07	26				0.00		0.0										
2020	07	27				Т												
2020	07	28				0.01												
2020	07	29				0.01												
2020	07	30				0.01												
2020	07	31				0.02												
		Summary				0.09		0.0										

Empty, or blank, cells indicate that a data observation was not reported.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

^{*}Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

[&]quot;s" This data value failed one of NCDC's quality control tests.

"At Obs." = Temperature at time of observation

[&]quot;T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

[&]quot;A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

National Centers for Environmental Information 151 Patton Avenue Asheville, North Carolina 28801

				1CAHM0004						original obse on 09/06/2020		Observa	ation Time Te	emperature:	Unknown Ob	servation Tim	e Precipitatio	วท: Unknown
			Te	emperature (l	F)			Precipitation			Evapo	ration			Soil Temp	erature (F)		
Y	M	D	24 Hrs. I Observa	Ending at tion Time		24 Ho	ur Amo Observa	unts Ending tion Time	at	At Obs. Time	24 Hour			4 in. Depth			8 in. Depth	
e a r	n t h	a y	Max.	Min.	At Obs.	Rain, Melted Snow, Etc. (in)	F I a g	Snow, Ice Pellets, Hail (in)	F I a g	Snow, Ice Pellets, Hail, Ice on Ground (in)	Wind Movement	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2020	08	01				0.01												
2020	08	02				0.01												
2020	08	03				Т												
2020	08	04				0.02												
2020	08	05				0.06												
2020	08	06				0.02												
2020	08	07				0.00		0.0										
2020	08	08				0.00												
2020	08	09				0.00												
2020	08	10				0.00												
2020	08	11				Т												
2020	08	12				0.00												
2020	08	13																
2020	08	14																
2020	08	15																
2020	08	16																
2020	08	17																
2020	08	18																
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2020	08	27																
2020	08	28																
2020	08	29																
2020	08	30																
2020	08	31																<u> </u>
		Summary	,			0.12		0.0										

Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

[&]quot;s" This data value failed one of NCDC's quality control tests. "At Obs." = Temperature at time of observation

[&]quot;T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

[&]quot;A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

www.ghd.com

GHD

718 Third Street

Eureka, CA 95501

T: 707.443.8326 F: 707.444.8330 E: <u>info@ghd.com</u>

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Traffic Operations Study for the McKinleyville Town Center Project



Prepared for the County of Humboldt

Submitted by **W-Trans**

March 25, 2025





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Appendices

A. Intersection Level of Service Calculations





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Executive Summary

The Humboldt County General Plan and McKinleyville Community Plan both envision the development of the McKinleyville Town Center, featuring a mix of land uses supported by multimodal transportation infrastructure. The proposed rezoning of the project site would lay the groundwork to achieve this vision. The purpose of this study is to analyze the effects on traffic operations associated with the potential development that would be permitted based on the proposed zoning changes and modifications to the transportation network.

The McKinleyville Town Center consists of an area of 134 acres, including 106 developable acres and 28 acres of wetland restoration/mitigation. The project would intensify the development pattern in the area and includes up to 2,650 residential units, 271,200 square feet of office space, and 632,800 square feet of commercial/retail space. To enable this development to occur, the project site would be rezoned to Mixed-Use Urban (MU1) and a "Q-Zone" combining zone would be adopted as an overlay to modify the MU1 zone. Central Avenue, the main north-south roadway through the site, would be modified by reducing the number of travel lanes to allow for enhanced bicycle facilities and facilitate pedestrian crossings.

There are no specific developments proposed for this project, with the exception of the Life Plan Humboldt project. As a result, the locations of the remaining future potential development were assigned based on availability of currently undeveloped land; future traffic volumes were estimated using the *Humboldt County Travel Demand Model* and were assigned to project area roadways based on existing travel patterns. The study area includes eight intersections, all of which are operating acceptably under Existing Conditions during the a.m. and p.m. peak periods. All eight study intersections are expected to operate acceptably under projected future volumes based on the current *General Plan* and travel demand model projections. With the addition of project trips associated with the buildout of the proposed Town Center in addition to estimated regional growth, six of the eight study intersections are expected to operate deficiently. Recommendations were developed for each of the intersections with deficient operations; with the inclusion of these improvements, all study intersections are expected to operate acceptably.



Introduction

This report presents an analysis of the potential adverse operational effects that would be associated with the rezoning of the McKinleyville Town Center to allow denser and pedestrian- and bicycle-friendly development on approximately 134 acres on 45 parcels. The study area is generally bounded by Railroad Drive to the North, Holly and Heartwood Drives to the south, McKinleyville Avenue to the west and Central Avenue and Hummingbird Drive to the east in the community of McKinleyville. The traffic study was completed in accordance with the criteria established by the County of Humboldt and is consistent with standard traffic engineering techniques.

Prelude

The purpose of a traffic operations study is to provide County staff and policy makers with data that they can use to make an informed decision regarding the potential transportation effects of a proposal, and any associated improvements that would be required to reduce these effects to an acceptable level under the County's General Plan or other policies. This report provides an analysis of vehicular traffic service levels at key intersections for consistency with General Plan policies by determining the number of new trips that the proposed Town Center development would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the study intersections and need for improvements to maintain acceptable operation.



Transportation Setting

Study Area and Periods

The study area for the operational analysis consists of the following intersections.

- 1. Murray Road/McKinleyville Avenue
- 2. Murray Road/Central Avenue
- 3. Railroad Drive/McKinleyville Avenue
- 4. Railroad Drive/Central Avenue
- 5. Hiller Road/McKinleyville Avenue
- 6. Hiller Road/Central Avenue
- 7. Heartwood Drive-Hayes Road/McKinleyville Avenue
- 8. Heartwood Drive/Central Avenue

Operating conditions during the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while the p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute. Counts were obtained for the study intersections in February 2024 when local schools were in session.

Study Intersections

Murray Road/McKinleyville Avenue is a four-legged intersection with all-way stop control. Crosswalks are marked on the south and west legs of the intersection, and there are curb ramps at the southeast and southwest corners of the intersection. Class II bicycle lanes are striped on all legs except for the north leg where there is only a bicycle lane in the southbound direction.

Murray Road/Central Avenue is an all-way stop-controlled, four-legged intersection with overhead-mounted flashing red indications facing all approaches. There are marked crosswalks on the south and east legs as well as a curb ramp at the southwest corner of the intersection. Bicycle lanes exist on the west (Murray Road) leg of the intersection.

Railroad Drive/McKinleyville Avenue is an unsignalized four-legged intersection with stop controls on the eastbound and westbound Railroad Drive approaches. A high-visibility crosswalk is marked across the north leg and a standard crosswalk is marked across the west leg. There are curb ramps at each corner of the intersection and bicycle lanes along McKinleyville Avenue.

Railroad Drive/Central Avenue is a signalized intersection with four legs and protected left-turn phasing on the northbound and southbound Central Avenue approaches. Bicycle lanes are striped on the north and south legs, and curb ramps are provided on each corner. High-visibility crosswalks are marked across all intersection legs.

Hiller Road/McKinleyville Avenue is a four-legged intersection with all-way stop control with Class II bicycle lanes striped on the north (McKinleyville Avenue) leg. The eastbound Hiller Road approach has a flared right-turn lane with space for approximately two right-turning vehicles while another vehicle continues straight, and the westbound approach has a flared right-turn lane with space for one right-turning vehicle.



Hiller Road/Central Avenue is a four-legged intersection with signal control and protected left-turn phasing on both Central Avenue approaches. There are bicycle lanes along Central Avenue at the intersection, high-visibility crosswalks across all legs except the east leg, and curb ramps on each corner.

Heartwood Drive-Hayes Road/McKinleyville Avenue is an all-way stop-controlled intersection with four legs. Class II bicycle lanes are striped on the east (Heartwood Drive) leg. Curb ramps are located at the northeast and northwest corners of the intersection.

Heartwood Drive/Central Avenue is a signalized four-legged intersection with protected left-turn phasing on the northbound and southbound approaches. There are high-visibility crosswalks on all legs and curb ramps on each corner. Bicycle lanes exist on the north and south legs.

The locations of the study intersections and the existing lane configurations and controls are shown in Figure 1.

Roadway Network

The main roadways in the project site are and their function are summarized here to provide context for the circulation characteristics.

Central Avenue, also known as Business 101, is a north-south minor collector lined primarily with commercial land uses. It parallels US 101 within the project site and is the primary access route between the project site and communities to the south via an interchange at US 101. There are two lanes in each direction with a two-way left turn lane and the posted speed limit is 35 miles per hour (mph).

Railroad Drive is a local road located along the northern boundary of the project site, connecting Central Avenue with McKinleyville Avenue. It includes one lane in each direction and has a speed limit of 25 mph. On-street parking is available along the south side of the street and part of the north side. Portions of the frontage along the south side are currently undeveloped.

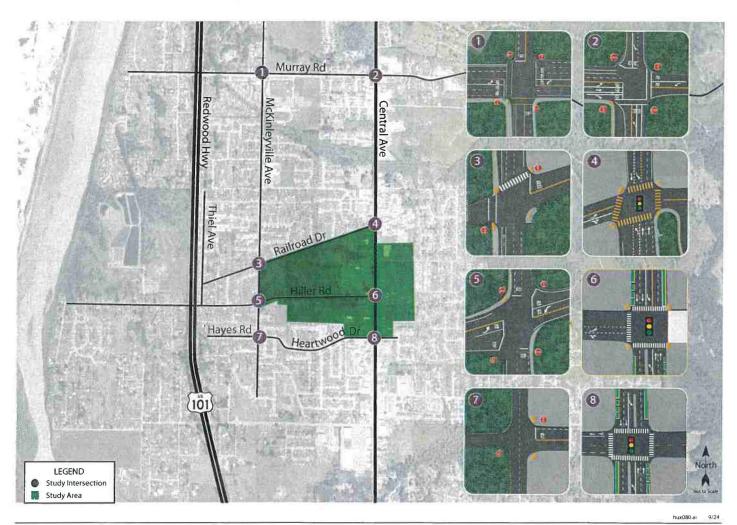
McKinleyville Avenue is a minor collector running north-south and parallel to US 101 and Central Avenue along the western boundary of the project site; it provides access to US 101 via interchanges at Murray Road to the north and Washington Avenue and School Road to the south. It is a two-lane roadway with a 25-mph speed limit with on-street parking available along the west side of the street.

Hiller Road is a local road running east-west connecting to Central Avenue and extending west across US 101, terminating near the Hammond Trail. While there is a grade-separated crossing of Hiller Road over US 101, there is no direct connection between the two roadways. Hiller Road has one lane in each direction with a speed limit of 35 mph. Much of the frontage is currently undeveloped, with on-street parking available along the frontages of the developed sections.

Murray Road is classified as a minor collector that runs east-west, with an interchange at US 101, connecting to Central Avenue, and linking McKinleyville to communities to the east. Between US 101 and Central Avenue there are four travel lanes and a two-way left turn lane, and the speed limit is 35 mph. West of US 101 and east of Central Avenue, there is one lane in each direction.

Heartwood Drive is a minor collector, running east-west and connecting to McKinleyville Avenue and Central Avenue. There is one lane in each direction, with a speed limit of 25 mph, and the corridor is characterized by residential and commercial land uses.





McKinleyville Town Center

Figure 1 – Study Area and Existing Lane Configurations



Project Data

Project Description

The project consists of modifications to existing zoning of the McKinleyville Town Center site to allow for the mix of land uses envisioned in the *Humboldt County General Plan* and *McKinleyville Community Plan*. This would include a mix of residential, commercial, and other uses. In addition, "complete streets" improvements are proposed along primary project area roadways to support multimodal transportation options for travel to, from and within the Town Center. The rezoning includes the establishment of a Q-Zone, an overlay zoning designation that would expand the permitted uses in the mixed-use zone to support the larger vision. The boundaries of the Town Center are shown in Figure 2.

Land Use

The Plan would allow for the addition of up to 2,650 residential units, 632,800 square feet of retail/ commercial uses, and 271,200 square feet of office uses at the Town Center site. This includes the Life Plan Humboldt project, which as proposed consists of 144 independent living residential units, 24 assisted living/ memory care units, 50 affordable residential units, plus common areas and support facilities. The remainder of the potential development is not assigned to specific sites, so the approximate distribution of those uses was determined through consultation with County staff.

Roadway Configurations

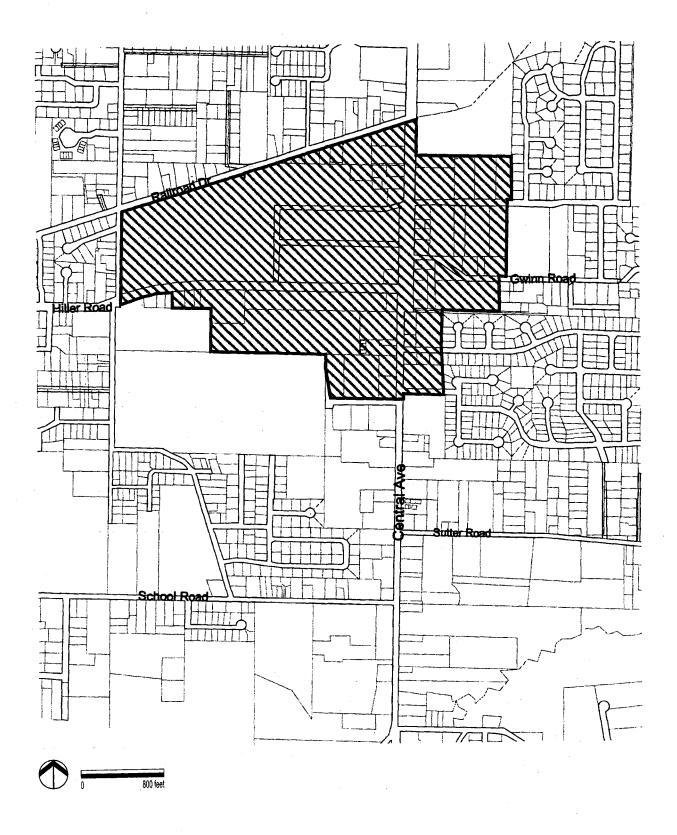
The project includes roadway modifications to support multimodal access and circulation, including facilities for bicyclists, and pedestrians. On Central Avenue between Railroad Drive and Heartwood Drive, there are currently two through lanes in each direction and a two-way left-turn lane. The proposed project includes a "road diet" on this segment of Central Avenue, with a proposed configuration of one through lane in each direction and a median that would become a left-turn lane in advance of each intersection. On Hiller Road, the Plan as proposed includes one through lane in each direction and a median that would become left-turn pockets at intersections.

Trip Generation

The vehicular trip generation associated with the potential intensification of land uses allowed by the Plan was determined using the *Humboldt County Travel Demand Model (HCTDM)*. HCTDM uses a traditional four-step travel demand modeling process relying on land use inputs to determine trip productions and attractions, trip distribution, mode choice, and assignment to the regional network. The model breaks the County down into smaller geographic areas referred to as traffic analysis zones, or TAZs. The Town Center site spans four TAZs, though the majority of development activity would be in one zone (TAZ 191), which is generally bound by Central Avenue, Railroad Drive, McKinley Avenue, and Hiller Road. The largest development site outside of TAZ 191 is the McKinleyville Shopping Center.

The additional development potential associated with the Plan was added to the HCTDM land use inputs. For modeling purposes, the portion of the potential development defined as "commercial/retail" was assumed to be entirely retail to produce a more conservative trip generation estimate. Model runs including the added development were then performed, and the increment, or "delta," in vehicular trips entering and exiting the TAZs tabulated by comparing "no project" and "plus project" model scenarios. The resulting increase in vehicular trips constitutes the project's total trip generation. Note that this process accounts for the anticipated internalization of trips within TAZs. Such internal trips are typically associated with non-auto travel so do not result in added vehicle trips on the surrounding roadway network; this type of trip is what makes a mixed-use urban or semi-urban environment such as that envisioned in the Town Center desirable from a transportation perspective.





Source: Humboldt County, mcKinleyville Community Plan 2017

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The expected trip generation potential for Town Center at full buildout is indicated in Table 1. The project is expected to generate an average of 35,883 trips per day, including 2,083 trips during the a.m. peak hour and 3,115 during the p.m. peak hour.

able 1 – Trip Generat	ion Summary						
Daily			PM Peak Hour				
Total	Total	In	Out	Total	/ In	Out	
35,883	2,083	1,164	919	3,115	1,335	1,780	

Note: Trip generation estimates obtained from HCTDM

Trip Distribution

The pattern used to allocate the added trips associated with buildout of the Town Center to the surrounding street network was based on "select zone" runs of the HCTDM, which show the peak hour volumes added to the roadway links coded in the model. From a regional perspective, HCTDM projects that approximately 14 percent of trips would be oriented to and from areas north of McKinleyville, 37 percent would be oriented to and from areas south of McKinleyville, including Eureka, four percent would be oriented to and from areas east of McKinleyville, and 45 percent would remain within McKinleyville.

Like most regional travel demand models, the roadway network contained in HCTDM is fairly coarse, primarily including major facilities such as freeways, arterials, and key collectors. The model is somewhat insensitive to roadway design and context, intersection configurations and delays, and the influences of smaller streets on prevailing travel patterns. Refinement of the HCTDM distribution patterns was therefore required to develop volume estimates for the local circulation network and intersections analyzed in this study, ensuring that the regional distribution projections noted above are preserved.

The distribution of added trips also presumes the completion of the extension of McKinleyville Avenue to the roundabout at the School Road/Salmon Avenue intersection. This roadway extension is planned as part of an approved development project and should be completed well before traffic associated with Town Center development projects occurs. This extension of McKinleyville Avenue provides a more efficient connection to the US 101 freeway interchange at School Road than presently exists.

The resulting distribution assumptions applied to the analysis of study intersections within, and surrounding Town Center are shown in Table 2.



Table 2 – Trip Distribution Assumptions	
Route	Percent
Central Ave - south of Heartwood Dr	22%
McKinleyville Ave – south to School Rd and US 101	20%
McKinleyville Neighborhoods north of Town Center	20%
McKinleyville Neighborhoods south of Town Center	11%
Murray Rd - west of McKinleyville Ave	9%
Central Ave - north of Murray Rd	7%
Heartwood Dr - east of Central Ave	4%
Murray Rd - east of Central Ave	3%
McKinleyville Ave - north of Murray Rd	2%
Hiller Rd - west of McKinleyville Ave	2%
TOTAL	100%

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM) *Sixth Edition*, Transportation Research Board, 2018. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the intersections with side street stop controls, or those which are unsignalized and have one or two approaches stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersections with stop signs on all approaches were analyzed using the "All-Way Stop-Controlled" Intersection methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole and is then related to a Level of Service.

The study intersections that are currently controlled by a traffic signal, or may be in the future, were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using signal timing obtained from the County.

The ranges of delay associated with the various levels of service are indicated in Table 3.



Tabl	e 3 – Intersection Level of Service (Criteria	
LOS	Two-Way Stop-Controlled	All-Way Stop-Controlled	Signalized
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
В	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
С	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach and wait for vehicle to clear from one or more approaches prior to entering the intersection.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop, and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 50 seconds. Drivers enter long queues on all approaches.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: Highway Capacity Manual, Transportation Research Board, 2018

Traffic Operation Standards

The County of Humboldt's LOS standard is specified in Policy C-P5 of the *Humboldt County General Plan*, which states that the County shall strive to maintain LOS C operation on all roadway segments and intersections except for US 101 where LOS D is considered acceptable. For the purposes of this analysis, the standard was applied to the overall operation of the intersection, not any single movement or approach. The policy also states that LOS improvements for automobiles should not adversely affect the LOS or quality of service for other modes of transportation, if possible.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes or any changes to the transportation network. Volume data was collected in February 2024 while local schools were in session.



Under existing volumes, all study intersections operate acceptably at LOS C or better. The existing traffic volumes are shown in Figure 3. A summary of the intersection Level of Service calculations is contained in Table 4, and copies of the calculations are provided in Appendix A.

Study Intersection	Existing Conditions					
Approach	AM F	Peak	PM Peak			
	Delay	LOS	Delay	LOS		
1. Murray Rd/McKinleyville Ave	16.4	C	10.9	В		
2. Murray Rd/Central Ave	14.5	В	13.7	В		
3. Railroad Dr/McKinleyville Ave	2.9	Α	2.0	Α		
EB (Railroad Dr) Approach	12.5	В	12.0	В		
WB (Railroad Dr) Approach	12.5	В	12.8	В		
4. Railroad Dr/Central Ave	13.3	В	8.8	Α		
5 Hiller Rd/McKinleyville Ave	10.6	В	12.2	В		
6. Hiller Rd/Central Ave	6.6	Α	8.1	Α		
7. Heartwood Dr-Hayes Rd/McKinleyville Ave	3.4	Α	2.8	Α		
EB (Hayes Rd) Approach	12.5	В	12.4	В		
WB (Heartwood Dr) Approach	11.5	В	11.9	В		
8. Heartwood Dr/Central Ave	8.7	Α	9.5	Α		

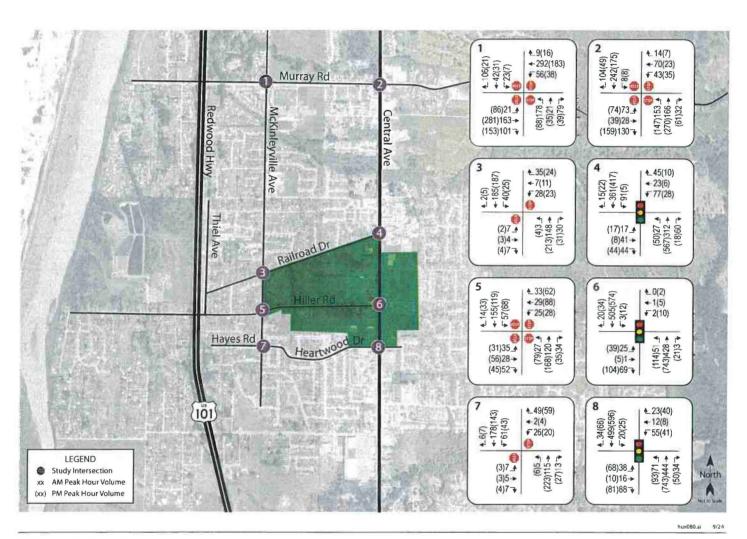
Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Future Conditions

Segment volumes for the horizon year of 2045 were obtained from the HCTDM runs performed for the Town Center project and translated to turning movement volumes at each of the study intersections using the "Furness" method. The Furness procedure is a commonly used iterative factoring algorithm that employs existing turning movement data, base year model link volumes, and future year model link volumes to estimate likely future turning movement volumes at intersections. Future "no project" traffic volumes assume no changes to the year 2045 land use estimates contained in the HCTDM. When analyzing "plus project" conditions with Town Center, the projected buildout traffic volumes associated with Town Center are added to these future "no project" volumes. For purposes of all model scenarios, the HCTDM network was updated to include the existing Heartwood Drive connection between McKinleyville Avenue and Central Avenue.

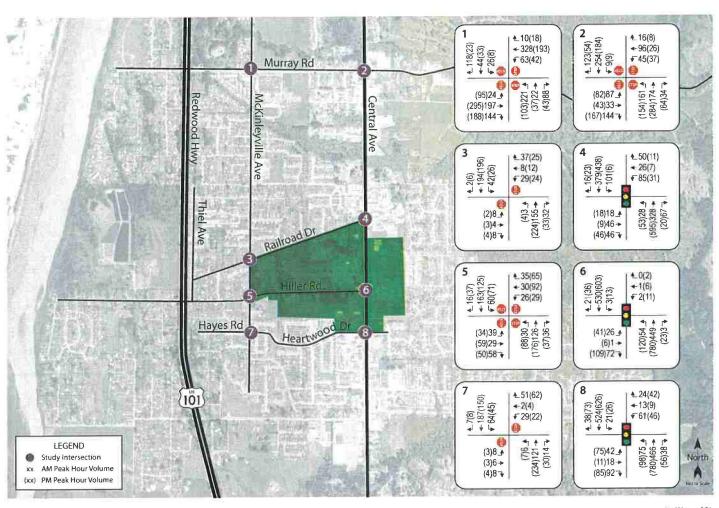
The anticipated future volumes at the study intersections (without Town Center) generally show modest growth. Review of HCTDM output indicates that other roadways in the region, including US 101, are anticipated to encounter more substantial growth by 2045. Under Year 2045 conditions without the Town Center the study intersections are expected to continue operating acceptably at LOS C or better during both the a.m. and p.m. peak hours, meeting the County's LOS targets. Future volumes are shown in Figure 4 and operating conditions are summarized in Table 5.





McKinleyville Town Center
Figure 3 – Existing Traffic Volumes





McKinleyville Town Center
Figure 4 - Future Traffic Volumes



Та	Table 5 – Future Peak Hour Intersection Levels of Service									
St	udy Intersection	AM F	AM Peak							
	Approach	Delay	LOS	Delay	LOS					
1.	Murray Ave/McKinleyville Ave	20.9	С	11.8	В					
2.	Murray Ave/Central Ave	16.4	С	14.7	В					
3.	Railroad Dr/McKinleyville Ave	3.0	Α	2.1	Α					
	Eastbound (Railroad Dr) Approach	12.8	В	12.3	В					
	Westbound (Railroad Dr) Approach	12.8	В	13.2	В					
4.	Railroad Dr/Central Ave	13.8	В	9.2	Α					
5	Hiller Rd/McKinleyville Ave	11.1	В	13.0	В					
6.	Hiller Rd/Central Ave	6.7	Α	8.3	Α					
7.	Heartwood Dr/McKinleyville Ave	3.6	Α	2.8	Α					
	Eastbound (Heartwood Dr) Approach	12.9	В	12.7	В					
	Westbound (Heartwood Dr) Approach	11.9	В	12.2	В					
8.	Heartwood Dr/Central Ave	9.0	Α	10.0	В					

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Project Conditions

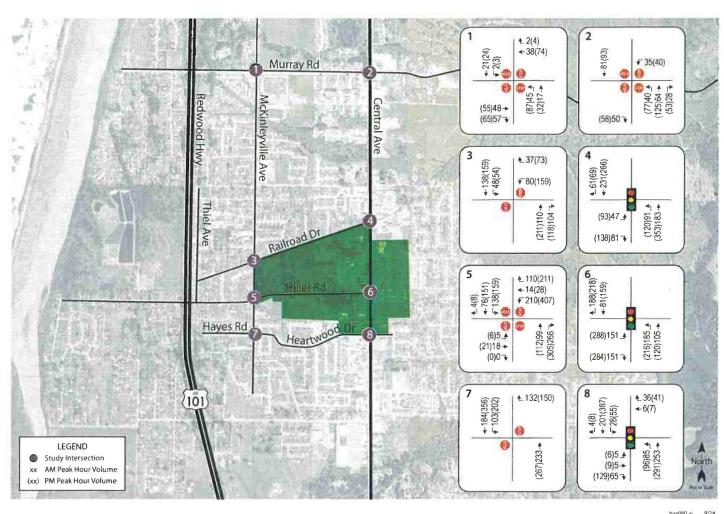
Future plus Project Conditions

As the proposed project is a long-range plan that would not be built out for many years, the effects of project traffic on intersection operation were analyzed under a future year condition assuming project buildout. It should be noted that while the future scenario corresponds to the Humboldt County travel demand model's forecast year of 2045, actual buildout of the project is likely to occur well beyond this date.

The Future plus Project traffic analysis includes the proposed road diet on Central Avenue between Railroad Drive and Heartwood Drive, which would remove one through lane in each direction. The analysis also includes the widening of Hiller Road to include a median with turn pockets. There are also network improvements that were assumed such as the extension of McKinleyville Avenue to the south, where it will connect to the existing roundabout on School Road. Volumes associated with project-generated trips are presented in Figure 5.

Upon the addition of project-generated traffic to the anticipated future volumes along with the proposed roadway modifications, six of the eight study intersections would be expected to operate at a worse Level of Service than the County's LOS C target. The Future plus Project operating conditions are summarized in Table 6, and copies of the calculations are contained in Appendix A.





McKinleyville Town Center
Figure 5 - Project Traffic Volumes



Study Intersection		F	Future Conditions			Future plus Project			
	Approach	AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1.	Murray Ave/McKinleyville Ave	20.9	С	11.8	В	32.9	D	18.9	С
	Signalized			•		10.9	В	10.8	В
2.	Murray Ave/Central Ave	16.4	С	14.7	В	26.2	D	55.4	F
	Signalized			7	14/3	25.5	C	24.9	C
	Roundabout					9.2	Α	10.5	В
3.	Railroad Dr/McKinleyville Ave	3.0	Α	2.1	Α	8.0	Α	57.1	F
	EB (Railroad Dr) Approach	12.8	В	12.3	В	19.4	C	22.3	C
	WB (Railroad Dr) Approach	12.8	В	13.2	В	37.2	E*	**	F
	Add AWSC and turn pockets ¹				2.7	13.0	В	21.8	C
	Roundabout	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				6.3	Α	8.3	Α
4.	Railroad Dr/Central Ave	13.8	В	9.2	Α	23.7	С	24.3	С
5	Hiller Rd/McKinleyville Ave	11.1	В	13.0	В	80.7	F	**	F
	Signalized, add SB left-turn pocket		Y À			10.2	В	30.4	C
	Roundabout with WB right-turn pocket	ż		÷ (9.3	Α	21.0	C
6.	Hiller Rd/Central Ave	6.7	Α	8.3	Α	34.5	С	81.9	F
	Add SB right-turn pocket, modify phasing?,			- 150 - 157 - 158) .a	19.9	В	45.9	D
	Close driveway on east leg³			•		15.4	В	33.3	C
7.	Heartwood Dr/McKinleyville Ave	3.6	Α	2.8	Α	6.0	Α	13.4	В
	EB (Heartwood Dr) Approach	12.9	В	12.7	В	31.7	D*	77.4	F*
	WB (Heartwood Dr) Approach	11.9	В	12.2	В	22.3	C	73.2	F*
8.	Heartwood Dr/Central Ave	9.0	Α	10.0	В	18.0	В	57.9	E
	Resume 2 SB lanes 100-ft north of intersection, add EB right-turn pocket					14.2	В	29.4	c .

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; AWSC = All-Way Stop Controls; EB = Eastbound; SB = Southbound; WB = Westbound; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; * = minor movements operating below LOS C considered acceptable if intersection operates acceptably overall; ** = delay greater than 120 seconds; **Bold** text = deficient operation; Shaded cells = conditions with recommended improvements

Modifications Required to Address LOS Deficiencies

The following the intersection modifications would need to be implemented to achieve the County's LOS C target under future conditions with buildout of Town Center.



¹ add left-turn pockets southbound and eastbound, add right-turn pocket northbound

² split left-turn phasing eastbound and westbound, right-turn overlap phases southbound and eastbound

³ includes SB right-turn pocket and phasing changes; access to east remains at driveways north and south of signal

- Murray Road/McKinleyville Avenue Signalize the intersection, resulting in LOS B operation.
- Murray Road/Central Avenue Signalize the intersection, resulting in LOS C operation, or install a single-lane roundabout, which would result in LOS A or B operation.
- Railroad Drive/McKinleyville Avenue Install all-way stop-controls. Add left-turn pockets on the southbound and eastbound approaches, as well as a right-turn pocket on the northbound approach. These modifications would result in LOS C or better operation. Alternatively, construct a single-lane roundabout at the intersection, which would result in LOS A operation.
- **Hiller Road/McKinleyville Avenue** Install a traffic signal and add a southbound left-turn pocket, resulting in LOS C or better operation. Alternatively, install a single-lane roundabout with westbound right-turn slip lane, which would also result in LOS C or better operation.
- Hiller Road/Central Avenue As part of the Central Avenue road diet implementation, maintain a southbound right-turn pocket at the intersection, restripe the eastbound Hiller Avenue approach to include through/left-turn and right-turn lanes, and modify the signal to include split phasing on the eastbound and westbound approaches plus right-turn overlap phasing on the southbound and eastbound approaches. These modifications are anticipated to improve future intersection operation from LOS F to LOS D during the p.m. peak hour with buildout of Town Center. While LOS D is not satisfactory compared to the operational target established by the County, auto operation in the LOS D range is common in downtown areas and locations where prioritization of non-auto modes is a community goal. It is recommended that the County consider allowing LOS D operation on Central Avenue in the Town Center area in recognition of the desire to balance traffic flow with the need to encourage and support non-auto travel. If the County and/or decision makers prefer to maintain the LOS C target in this area, LOS C operation could be achieved by closing the private driveway approach on the intersection's east leg, allowing the signal to operate more efficiently by allocating more "green time" to the three public street approaches. Access to the affected property on the east side of Central Avenue would remain at driveways to the north and south of the signal, though left-turn movements at these driveways would be difficult.
- Heartwood Drive/Central Avenue As part of the Central Avenue road diet implementation, resume two southbound through lanes on the Central Avenue intersection approach beginning approximately 100 feet north of the intersection. This modification would improve efficiency of the signal and conform to the dual southbound lanes existing to the south of the intersection. The westbound Heartwood Drive approach should be restriped to provide a right-turn pocket. With these modifications, the intersection would operate acceptably at LOS C under future conditions with buildout of Town Center.

Finding – Under Future volumes with the addition of project traffic, six of the eight study intersections will operate at a level of service worse than LOS C during one or both peak hours. Recommendations were developed to improve traffic operations at these locations.

Recommendations – To achieve acceptable operation under Future plus Project volumes at the intersections expected to operate below County standards, the following improvements are recommended.

- Murray Road/McKinleyville Avenue: Install traffic signal.
- Murray Road/Central Avenue: Install traffic signal or a roundabout.
- Railroad Drive/McKinleyville Avenue: Install all-way stop controls with turn pockets or a roundabout.
- Hiller Road/McKinleyville Avenue: Install a traffic signal with a southbound left-turn pocket or install a roundabout with a westbound right-turn slip lane.
- Hiller Road/Central Avenue: Add a southbound right-turn pocket and modify the signal phasing. To achieve LOS C operation, the County would need to consider closing the driveway on the east leg of the intersection.
- Heartwood Drive/Central Avenue: Retain two southbound lanes beginning 100 feet north of the intersection, and add an eastbound right-turn pocket.



Conclusions and Recommendations

Conclusions

- Buildout of the proposed McKinleyville Town Center project would yield up to 2,650 housing units, 271,200 square feet of office space, and 632,800 square feet of retail/commercial development. The project is estimated to generate 35,883 daily trips, including 2,083 trips during the a.m. peak hour and 3,115 trips during the p.m. peak hour.
- Under existing volumes, all eight study intersections operate acceptably at LOS C or better during both peak hours.
- Under future "no project" volumes, all study intersections are expected to continue operating acceptably during both the a.m. and p.m. peak hours.
- Under future volumes, including trips associated with the buildout of Town Center, and with the proposed
 road diet along Central Avenue, six of the eight study intersections are expected to operate deficiently (worse
 than the County's target of LOS C) during the a.m. and/or p.m. peak hour. Recommendations were developed
 for these intersections, and the implementation of these recommendations would result in acceptable
 operations at all intersections.

Recommendations

To maintain a service level at or above the acceptable LOS C standard based on County policy, the following recommendations are proposed.

- Install a traffic signal at Murray Road/McKinleyville Avenue.
- Signalize the intersection of Murray Road/Central Avenue or install a single-lane roundabout.
- At Railroad Drive/McKinleyville Avenue, either install all-way stop control and turn pockets on three of the four approaches or construct a single-lane roundabout.
- Install a traffic signal at Hiller Road/McKinleyville Avenue with a southbound left-turn pocket or install a single-lane roundabout with a westbound right-turn slip lane.
- At Hiller Road/Central Avenue, maintain a southbound right-turn pocket at the intersection, restripe the
 eastbound approach to include through/left-turn and right-turn lanes, add east-west oriented split phasing,
 and provide right-turn overlap phasing on the southbound and eastbound approaches. These modifications
 would result in LOS D operation. The County may wish to consider allowing LOS D on Central Avenue in the
 Town Center area. Alternatively, LOS C operation could be achieved by closing the private driveway approach
 on the intersection's east leg.
- Add an eastbound right-turn pocket to the intersection of Heartwood Drive/Central Avenue and retain two southbound lanes beginning 100 feet north of the intersection.



Study Participants and References

Study Participants

Principal in Charge Transportation Planners Assistant Engineer Graphics Editing/Formatting Quality Control Dalene J. Whitlock, PE (Civil, Traffic), PTOE Zack Matley, AICP, Barry Bergman, AICP Nathan Sharafian, EIT Jessica Bender Jessica Bender, Rebecca Mansour Dalene J. Whitlock, PE (Civil, Traffic), PTOE

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Appendix A

Intersection Level of Service Calculations



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Infersection												
Intersection Delay, s/veh	164											
Intersection LOS	C	SAFTA		UL SIL	277	SALVA.	1112	il and	9 1	100		
Movement	EBL	EBT	EBR	WBL	WBT	Win	NEL	NET	NOR	SBL	6BT	SBR
Lane Configurations	ħ	† †a		W	470	The state of the s		410			efe	
Traffic Vol, veh/h	21	163	101	58	292	. 0	178	21	79	23	42	108
Future Vol, veh/h	21	163	101	56	292	. 0	178	21	79	23	42	106
Peak Hour Factor	0.85	0.85	0.85	0.89	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2		2	2	2	2	2
Mymt Flow	25	192	119	65	344	11	209	25	93	27	49	125
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Appraich	EB	+	SALE	WB		TV.	NB	200		68	VAL	
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			1			- 1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1						3			3		
Conflicting Approach Right	NB			SB			WB			E8		
Conflicting Lanes Right	1			1			3		and the	3		BRE
HCM Contro! Delay	13.1			14.3			23.6			148		
HCM LOS	В	IF S	500	В	500	THE R.	C	etimes.		8		
Production of the Control of the Con		NBLn1	Forest	EBLn2	£BLn3	WELni	WBLn2	16871.40	SBlad			
Line	and the same of the		EBINI							£181	-411-	20.71
Vol Left, %		64%	100%	0%	0%	100%	0%	0%	13%			CARLO
Vol Thru, %	- California	8%	0%	100%	35%	6%	100%	92%	25%			534
Vol Right, %		28%	0%	0%	65%	0%	0%	8%	62%	-		TOGETH.
Sign Control	interior di	Stop	Stop	Stop	Stop	Stop	Slop	Stop	Slop	A Park I	9-14	
Traffic Vol by Lane		278	21	109	155	56	195	106	171	_		-
T Vol	MIN CA	178	21	0	0	56	0	0	23		- Consul	0.1
Through Vol		21	0	109	54	D	195	97	42			
RT Vol		79	0	D	101	0	0	9	105	100	ALC: U	1-01
ane Flow Rate		327	25	128	183	66	229	125	201	-		
Geometry Grp	Tak'	- 5	5	5	5	5	5	5	5		2014	223
Degree of Ubl (X)		0 666	0 054	0 263	0.352	0 142	0 461	0.249	0 402	_		
Departure Headway (Hd)	7111	7.327	7.931	7 413	6.941	7.757	7.24	7.178	7.201			34
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Сар		494	451	483	517	461	497	499	499			
Service Time		5 082	5.695	5 177	4 705	5 5 1 8	5	4 939	4 965			
HCM Lane V/C Ratio		0.662	0.055	0.265	0.354	0.143	0.461	0.251	0.403	4, 4	1	
HCM Control Delay		23 5	11.2	12.8	135	11.8	16 1	12.3	148			
		C	В	В	-8	А	C	B	8			
HCM Lane LOS* HCM 95th-tile Q	-	48	0.2	1	16	0.5	2.4	1	19			-

Intersection		-0	1	35	MA.		1000	4	Sept.	0.01	11.1	The same		200
Intersection Delay, sive	h145													
Intersection LOS	В	100		WI5S					Total Control	5419	174.5	-	2500	1
Movement	EBI	EBT	EBR	WEL	WBT	WER	NEL	INBT	NBR	881	SBT	SBR		
Lane Configurations	-	1	- 7		Ţ,		*	1		- 1	A	#		
Traffic Vol. vehiti	73	28	130	43	70	14	153	186	32	В	242	104		
Future Vol, veh/h	73	_ 28	130	43	70	.14	153	166	32	8	242	104		
Peak Hour Factor	0.89	0.88	0.80	0.89	0.89	0.89	0.89	0.69	0.89	0.89	0.89	0.69		
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	- 2	2	2		
Mymt Flow	82	31	140	48	79	16	172	187	36	9	272	117	MIT THE	Till I
Number of Lanes	1	1	1	1	1	0	1	1	0	1	1	1		
Approach	E			WB	L.E.	CO.	NB			8B	7	Marine,	250	
Opposing Approach	WB			EB			SB			NB				
Opposing Lanea	2	AL PRO	1	3	MINE	ME IN	3	附近	L.E	2	140	100	210.00	Co.
Conflicting Approach Le	ft SB	-		NB			EB			WB				-
Conflicting Lanes Left	3	No.		2	50	= 10	3	CCII	EVILLE	2	4150		HIV CIT	150
Conflicting Approach Ri		-		SB		-	WB	-		EB		-		
Conflicting Lanes Right	2	100	WE S	3	EPIS	7251	2	613		3	OW	-	200	100
HCM Control Delay	124		-	12.5			15		-	16				
HCM LOS	В	The San S	DE LO	B	CANAL PROPERTY.	mert :	В	77-71		C	- INE	NEW PUR	PAUL CLEUK	ATT WA
919		BLn1	Mal no	CHI W	MINISTER STATE	erne Sa	MANUFACTOR AND						-	
/ol Left_%											SBLna			
		100%	0%	100%	0%	0%	100%	0%	100%	0%	0%			
And Thru, %		9%	0% 84%	100%	0% 100%	0%	100%	0% 83%	100% 0%	0% 100%	0% 0%	SUL.		
/ol Thru, % /ol Flight, %		9% 0%	0% 84% 16%	100% 0% 0%	0% 100% 0%	0% 0% 100%	100% 0% 0%	0% 83% 17%	100% 0% 0%	0% 100% 0%	0% 0% 100%			
Vol Tiru, % Vol Flight, % Sign Control		0% 0% Stop	0% 84% 16% Stop	100% 0% 0% Stop	0% 100% 0% Shp	0% 0% 100% Stop	100% 0% 0% Stop	0% 83% 17% Slop	100% 0% 0% 5top	0% 100% 0% Stop	0% 0% 100% Slop			
Vol Thru, % Vol Flight, % Sign Control Treffic Vol by Lane		0% 0% Stop 153	0% 84% 16% Stop 198	100% 0% 0% Stop 73	0% 100% 0% Slop 28	0% 0% 100% Stop 130	100% 0% 0% Stop 43	0% 83% 17% Slop 84	100% 0% 0% 5top 8	0% 100% 0% Slop 242	0% 0% 100% Slop 104			
/ol Thru, %: /ol Flight, %: Sign Control raffic Vol by Lane T. Vol		0% Stop 153 153	0% 84% 16% Stop 198	100% 0% 0% Stop 73	0% 100% 0% Slop 28	0% 0% 100% Stop 130	100% 0% 0% Stop 43 43	0% 83% 17% Slop 84	100% 0% 0% 5top 8	0% 100% 0% Stop 242	0% 0% 100% Slop 104			
/ol Thru, % /ol Flight, % Sign Control fr≘ffic Vol by Lame T-Vol Trraugh Vol		0% Stop 153 153	0% 84% 16% Stop 198 0	100% 0% 0% Stop 73 73	0% 100% 0% Slop 28 0	0% 0% 100% Stop 130 0	100% 0% 0% Stop 43 43	0% 83% 17% Slop 84 0 70	100% 0% 0% 5top 8 8	0% 100% 0% Slop 242 0 242	0% 0% 100% Slop 104 0			
Vol Thru, % Vol Right, % Sign Control Freffic Vol by Lane T, Vol Through Vol RT Vol		0% Stop 153 153 0	0% 84% 16% Stop 198 0 166 32	100% 0% 0% Stop 73 73 0	0% 100% 0% Shop 28 0 28	0% 0% 100% Stop 130 0 0	100% 0% 0% Stop 43 43 0	0% 83% 17% Slop 84 0 70	100% 0% 0% 5top 8 8	0% 100% 0% Stop 242 0 242	0% 0% 100% Slop 104			
Vol Thru, % Vol Right, % Sign Control Fraffic Vol by Lane T, Vol Through Vol RT Vol Anne Flow Rate		0% Stop 153 153 0 0 172	0% 84% 16% Stop 198 0 166 32 222	100% 0% 0% Step 73 73 0 0	0% 100% 0% Shop 28 0 28 0 31	0% 0% 100% Stop 130 0 0 130 146	100% 0% 0% Stop 43 43 0 0	0% 83% 17% Slop 84 0 70 14 94	100% 0% 5top 8 8 0	0% 100% 0% Slop 242 0 242 0 272	0% 0% 100% Slop 104 0 0 104 117			
Vol Thru, % Vol Right, % Sign Control Fraffic Vol by Lane T, Vol Through Vol RT Vol Anne Flow Rate		0% Stop 153 153 0	0% 84% 16% Stop 198 0 166 32	100% 0% 0% Stop 73 73 0	0% 100% 0% Shop 28 0 28	0% 0% 100% Stop 130 0 0	100% 0% 0% Stop 43 43 0	0% 83% 17% Slop 84 0 70	100% 0% 0% 5top 8 8	0% 100% 0% Stop 242 0 242	0% 0% 100% Slop 104 0 0			
All Thru, %. Yol Right, %. Signific Vol by Lane T. Vol. Trough Vol. T. Vol. Through Vol. T. Vol. Through Vo		0% Stop 153 153 0 0 172	0% 84% 16% Stop 198 0 166 32 222	100% 0% 0% Step 73 73 0 0	0% 100% 0% Shop 28 0 28 0	0% 0% 100% Stop 130 0 0 130 146	100% 0% 0% Stop 43 43 0 0	0% 83% 17% Slop 84 0 70 14 94	100% 0% 5top 8 8 0	0% 100% 0% Slop 242 0 242 0 272	0% 0% 100% Slop 104 0 0 104 117			
/ol Thru, % /of Right, % /of Right, % /or Ri		0% 0% Stop 153 153 0 172 6	0% 84% 16% Stop 198 0 166 32 222 6	100% 0% 0% Step 73 73 0 0 82 6	0% 100% 0% Sbp 28 0 28 0 31 6	0% 0% 100% Stop 130 0 0 130 145 6 0 283	100% 0% 0% Stop 43 43 0 0 48 6	0% 83% 17% Slop 84 0 70 14 94 6 0 206	100% 0% 0% 5top 8 8 0 0	0% 100% 0% Slop 242 0 242 0 272 6 0 545	0% 0% 100% Slop 104 0 0 104 117 6			
All Thru, % Joi Right, % Sign Control raffic Vol by Lane T. Vol ana Flow Rate Economy Grp Jegner O Uni (X) Jegnarure Headway (Ho)		0% 0% Stop 153 153 0 172 6 0 366	0% 84% 16% Stop 198 0 166 32 222 6 0 435	100% 0% 0% 0% \$top 73 73 0 0 82 6	0% 100% 0% Stop 28 0 28 0 31 8	0% 0% 100% Stop 130 0 0 130 145 6 0 283	100% 0% 0% Stop 43 43 0 0 48 6 0 114	0% 83% 17% Slop 84 0 70 14 94 6 0 206	100% 0% 0% 5top 8 8 0 0	0% 100% 0% Slop 242 0 242 0 272 6 0 545	0% 0% 100% Slop 104 0 0 104 117 6			
/ol. Thru. % /ol. Right, % /ol. Right, % /ol. Right, % /ol. Right, % /ol. Right /reduction of the first /reduc		0% Stop 153 153 0 172 6 0 366 7.664	0% 84% 16% Stop 198 0 166 32 222 6 0 435 7.043	100% 0% 0% 5%p 73 73 0 0 82 6 0 187 8 206	0% 100% 0% Slop 28 0 28 0 31 6 0 067 7.697	0% 0% 100% Stop 130 0 0 130 145 6 0 283 6 985	100% 0% 0% 5top 43 43 0 0 48 6 0 114 8 484	0% 83% 17% Slop 84 0 70 14 94 6 0 206 7.855	100% 0% 0% 5top 8 8 0 0 9 6 0 019 7.724	0% 100% 0% Slop 242 0 242 0 272 6 0 545 7.216	0% 0% 100% Slop 104 0 0 104 117 6 0.211 8.506			
Vol Thru, %, vol Right, %, Sign Control Traffic Vol by Lane T. Vol T. Vol The Was an Entry Rate Secrety Grp Jogges of Util (X) Jepanture Hendway (Hol Lanvergence V/N		0% Stop 153 153 0 172 6 0 366 7.664 Yes	0% 84% 16% Stop 198 0 166 32 222 6 0 435 7,043 Yes	100% 0% 0% \$5p 73 73 0 0 82 6 0 187 8 206 V=8	0% 100% 0% Slop 28 0 28 0 31 8 0 067 7.697 Yes	0% 0% 100% Stop 130 0 130 145 6 0 283 6 985 Yes 514	100% 0% 0% Stop 43 43 0 0 48 6 0 114 8 484 Yen 472	0% 83% 17% Slop 84 0 70 14 94 6 0 206 7.855 Yes	100% 0% 0% 5top 8 8 8 0 0 9 6 0 019 7.724 Yen	0% 100% 0% Slop 242 0 242 0 272 6 0 545 7.216 Yes 500	0% 0% 100% Slop 104 0 104 117 6 0.211 8.506 Yes			
Vol Thru, %. Vol Right, %. Sign Control reaffe Vol by Lane T. Vol I reaugh Vol TI Vol Lane Flow Rate Secreely Gep Legere of Uti (X) Legerature Hendway (Ho Lanvergence: V/N Legerature Hendway (Ho Legerature Legerature) Legerature Legeratur	()	0% Stop 153 153 0 172 6 0 366 7.664 Yes 469	0% 84% 16% Stop 198 0 166 32 222 6 0 435 7,043 Ves 612 4 787	100% 0% 0% Stop 73 73 0 0 82 6 0 187 8206 Veb	0% 100% 0% Stop 28 0 28 0 31 8 0 067 7.697 Yes 485	0% 0% 100% Stop 130 0 130 145 6 0 283 6 985 Yes 514	100% 0% 0% Stop 43 43 0 0 48 6 0 114 8 484 Yen 422	0% 83% 17% Slop 84 0 70 14 94 6 0 206 7.855 Yes 457 5.609	100% 0% 0% 5top 8 8 0 0 9 6 0 019 7.724 Ven 484 5.468	0% 100% 0% Slop 242 0 242 0 272 6 0 545 7.216 Yes 500	0% 0% 100% Slop 104 0 0 104 117 6 0.211 8.506 Yes 552 4.249			
Vol Tipst, % Sign Control Traffic Vol Typ Lane Traffic Vol by Lane Traffic Vol by Lane Traffic Vol Lane Flow Rate Secondry Gsp Degree of Ust (X) Degrature Headway (Hd Canwer gancs V/N Lap Service Traffic Lane V/C Ratio	()	0% Stop 153 153 0 172 6 0 366 7.664 Yes 469 5 408	0% 84% 16% Stop 198 0 166 32 222 6 0 435 7,043 Ves 612 4 787	100% 0% 0% Stop 73 73 0 0 82 6 0 187 8206 Vee 437 5.957	0% 100% 0% Shop 28 0 28 0 31 6 0 067 7.697 Yes 465 5 448	0% 0% 100% Stop 130 0 130 145 6 0 283 6 985 Yes 514 4.735	100% 0% 0% Stop 43 43 0 0 48 6 0 114 8 484 Yen 472 6 238	0% 83% 17% Slop 84 0 70 14 94 6 0 206 7.855 Yes 457 5.609	100% 0% 0% 5top 8 8 0 0 9 6 0 019 7.724 Ven 484 5.468	0% 100% Shop 242 0 242 0 272 6 0 545 7.216 Yes 500 4 96	0% 0% 100% Slop 104 0 0 104 117 6 0.211 8.506 Yes 552 4.249			
Vol Thru, % Vol Right, % Sign Control Sign Control Traffic Vol by Lane T.T.Vol Through Vo. KT, Vol Lane Flaw Rate Geometry (Sip Degree of Usi (X) Eleonitus Headway, (Ho Carnway gance V/N Lap Service Time Cliff Mane V/O Ratio -(CM Canotto Delay -(CM Lanet V/O Ratio -(CM Lanet V/O Ra	()	0% Stop 153 153 0 172 6 0 366 7.664 Yes 469 5 408	0% 84% 16% Stop 198 0 166 32 222 6 0 435 7,043 Yes 512 4 787 0 434	100% 0% 0% Stop 73 73 0 82 6 0 187 8 206 Veb 437 5.957 0.188	0% 100% 0% Shop 28 0 28 0 31 6 0 067 7.697 Yes 465 5 448 0.067	0% 0% 100% Stop 130 0 130 145 6 0 283 6 985 Yes 514 4.735 0.284	100% 0% 0% Stop 43 43 0 0 48 6 0 114 8 484 Yen 472 6 238 0 114	0% 837 17% Slop 84 0 70 14 94 6 0 206 7.855 Yes 457 5.609 0.206	100% 0% 5top 8 8 0 0 9 6 0 019 7.724 Ven 484 5.468 0.019	0% 100% Shop 242 0 242 0 272 6 0 545 7.216 Yes 500 4 96 0.544	0% 0% 100% Slop 104 0 0 104 117 6 0.211 8.506 Yes 552 4.249 0.212			

HCM 6th AWSC 2: Central Ave & Murray Rd

Intersection														
int Delay s/veh	2.9													
Movement	EBL	EBT	EBR	WBL	WBT	WER	NEL	NBT	NER	SEL	681	6BR		
Lane Configurations	-	4		2015	+10	/ mir		4			-			
Traffic Vol. veh/h	- 7	4	- 7	28	1	35	3	148	30	40	185	2		
Future Vol. veh/h	7	4	.7	28	7	35	3	148	30	40	185	- 2		
Conflicting Peds, Whr	9	0	- 2	-1	0	8	2	0	1	- 8	0			
Sign Control	Stop	Stop	Stop	Slop	Slop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	-			100		None		Da.	None			None		
Storage Length			-	-					-					
Veh in Median Storage	# -	D		-	0			0	Ilera)	1072	0	1		W
Grade. %		0		_	0	-	-	0			0			
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85		
Heavy Vehides, %	2	2	2	- 2	2	2	2	2	2	2	2	7		
Mymt Flow	8	5	8	33	8	41	4	174	35	47	218	2	1	
				-							THE PERSON NAMED IN	-		
Unior/Minor	Jinor2			Merce I			Major1	-81-	- 1	Major2	E 1/2		E	
Conflicting Flow All	555	547	230	530	531	209	229	0	0	217	0	0		
Stage 1	322	322		208	208			- 4		-	44.	-		
Stage 2	233	225		322	323									
Critical Howy	7.12	6.52	6.22	7 12	6.52	6 22	4.12	MARCH 197		4.12				303
Critical Howy Stg 1	6 12	5 52	14	6 12	5 52	-		-		la la				
Critical Howy Stg 2	6 12	5.52		6.12	5.52			_ (2)		-	- 2	No.		
Follow-up Hdwy	3518	4018	3 318	3518	4018	3 318	2 2 1 8		-	2218				
Pot Cap-1 Maneuver	442	445	809	460	454	831	1339	- 1		1353		100		
Stage 1	690	651	-	794	730	The same of	-		-	2		-		
Stage 2	770	718	1	690	650	-	-	-				100		
Platoon blocked %									-		-	- 1		
Moy Cap-1 Maneuver	393	419	801	432	427	818	1328	-	-	1343		100		43.
Mov Cap-2 Maneuver	393	419	100	432	427			-				-		
Stage 1	682	619		785	722	,		317	1.41	-	-		W21112	
Stage 2	715	710	1	649	618					6				
			1.3		INC.							1		
Approach	EB			MB	dir.		NU		35.1	dil	- Hall			3
HCM Control Delay, s	12.5			12.5			0.1			73.4		-	All of	
HCM LOS	В			В										
		VE S			H-P			124			are.			
Unor Lane/Major Mun	ď	HBL	NET	MEER	ERLAN	VBLat	BEL	SET	GER			T. I	al Table	
Capacity (veh/h)	190	1328	12	=0	499	565	1343	- 71	file.	ACL -		25		
HCM Lane V/C Rabo		0 003			0 042	0 146	0 035							
HCM Control Delay (s)		7.7	- 0	Time.	12.5	12.5	7.8	0	1.					
HCM Lane LOS		A	A	.1	8	B	A	Α						
HCM 95th %tile Q(veh)		0	10	HS.	0.1	0.5	0.1	=T	-24				1100	

Traffic Operations Study for the Mickinleyville Town Center Project WiTrans

AM Existing Page 3

HCM 6th Signalized Intersection Summary 4 Central Ave & Railroad Dr

08/21/2024

	,	\rightarrow	7	-	-	1	1	1	-	1	Ţ	1
Movement	FRI	EBT	EBR	WBL	WBT	WBR	NBL	NET	MBA	SPL	183	SER
Lane Configurations	1	1			e\$s		-	44		7	Į.	
Traffic Volume (verift)	17	41	44	77	23	45	27	312	60	91	361	15
Future Volume (veh/h)	17	41	44	77	23	45	27	312	60	91	361	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	B	0	0	0	0
Ped-Bike Adj(A pbT)	0.98		1 00	0.98		0.97	1 00		0.95	1 00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Field, withhin	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Ad Flow Rate velvh	20	48	0	91	27	32	32	367	45	107	425	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, weh/h	528	452	0	325	99	77	53	1067	130	142	691	26
Arrive On Green	0.24	0.24	0.00	0.24	0.24	0.24	0.03	0.34	0.34	0.08	0 39	0.39
Sat Flow, velvh	1316	1870	0	762	409	318	1781	3170	385	1781	1788	87
Grp Volume(v)_veh/h	20	48	0	150	0	0	32	204	208	107	0	441
Grp Sat Flow(st.velvfv/n	1316	1870	0	1488	0	0	1781	1777	1778	1781	0	1856
Q Serveig st s	00	0.8	0.0	20	0.0	0.0	0.7	35	36	24	0.0	78
Cycle Q Clearing ci. s	0.4	0.8	0.0	3.3	0.0	0.0	0.7	3.5	3.6	2.4	0.0	7.8
Prop In Larve	1.00		0.00	0.61		0.21	1 00	-	0 22	1.00	25.170	0.04
Lane Grp Cap(c) vertil	528	452	0	501	0	0	53	598	598	142	0	717
V/C Rato(X)	0.04	0 11	0.00	0 30	0.00	0.00	0.60	0 34	0 35	0.75	0.00	0.61
Avail Cap(c a), yelvh	1367	1645	0	1422	0	0	1045	2171	2173	1045	0	2267
HCM Platoon Ratio	1 00	1 00	1 00	1 00	1.00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), siveh	119	121	0.0	129	0.0	0.0	19 6	102	102	18 4	0.0	10 1
Incr Delay (d2), styth	0.0	0.0	0.0	0.1	0.0	0.0	10.5	0.6	0.6	7.8	0.0	1.5
Initial C Delay(d3) silven	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%de BackOf0(50%), veh/in	0.1	0.3	0.0	1.0	0.0	0.0	0.4	1.1	1.1	1.1	0.0	2.5
Umag Movement Delay s/vet		-			-							
LnGrp Delay(d) siveh	119	121	0.0	13.1	0.0	0.0	30 1	10.8	10.8	26.2	0.0	11.6
LnGrp LOS	В	8	A	В	A	Α	C	В	В	C	A	В
Approach Vol., weigh		68	55/17	- 1-1	150	200		444	200		548	9.5%
Approach Delay, shelt	_	12 1			13.1		_	12.2			14.4	
Approach LOS	-	8			В	100	-	В			В	
Timer Assigned Phs	1	2		4	5			8				
Phy Duration (G+Y+Rc) =	78	183	212	14.9	5.7	20.3		14.9	100.00			
Change Period (Y+Rc), s	4.5	45		5.0	4.5	45	-	5.0		240		
Max Green Setting (Gmax), s		50.0	_	36.0	24.0	50.0	THE REAL PROPERTY.	36.0		I Deliver	- 15	
Max O Clear Time (q. c+11), s	44	56		2.8	27	9.8	al-	53	_		_	_
Green Ext Time (p. c), s	02	4.5	0.00 T.A	0.2	0.0	52	Page 17	0.6	4.50	STIES.	I	
Interrection Surginary				J.E.	-	-		3.0	A 100 m			
HCM 6th Cirl Delay			13.3		11111			2-21/2	-	1	1	
HCM 6th LOS	-	Acres 1	13.3 B	-	100			170				
FILM OUR EUS			В									

Traffic Operations Study for the MicKinleyville Town Center Project W Trans

AM Existing Page 4

HCM 6th AWSC 5. McKinleyville Ave & Hiller Rd

08/21/2024

Intersection						50		UE						
Intersection Delay s/ve	h10 6													
Intersection LOS	В		300		HE	USS	400		5000	ELUF.	98.	E-3%	Name of	
				-										
Movement	BBL	EBT	EER	EVEL	WET	WER	NEE	NBT	NER	SEL	SBI	SER		
Lane Configurations	7	*	7	- 7	4	7	-	4		- 11	4			-6
Traffic Vol. veh/h	35	28	52	25	29	33	27	120	34	57	155	14		
Future Vol., veh/h	35	28	52	25	29	33	27	120	34	57	156	14		
Peak Hour Fector	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Myrnt Flow	41	33	61	29	34	39	32	141	40	67	182	16		
Number of Lanes	1	1	-1	1	-1	1	0	1	0	0	1	0		
Approach	EB	Ų.	THE REAL PROPERTY.	WB			NB	1	PL S	38			441	
Opposing Approach	WB			EB			SB			NB				
Opposing Lanes	3	THE		3	DAY.	ME	1	725	HEAT	1	Mary No.	340 6		田田
Conflicting Approach Le	ft SB			NB	-		EB			WB				
Conflicting Lanes Left	1	2.06	HIC	1	WW.		3	100	L (III)	3	10.		TELLIS	T NO
Conflicting Approach Ric	HNB			SB			WB			EB			-	
Conflicting Lanes Right	1		73.	1	AL IN	100	3	PT -	85	3	8	- 11	217	100
HCM Control Delay	91			9			10 7			119	-			
HCM LOS	A		136	A	34	13/5	В	THE REAL PROPERTY.	P#12	8	100		ALTER A	
				-										
Eane	h	BLnt	Elf mi	SBLn2	EBLA	W3Ln1	NBL12	MELINE	SELM		1	-5-6	70100	
Vol Left, %			100%	0%		100%	0%	0%	25%				1777	
Vol Thru, %	P IE	66%	0%	100%	0%	0%	100%	0%	69%		MILL			THE RES
Vol Right, %		19%	0%	0%		0%	0%		6%					
Sign Control		Stop	Stop	Slop	Slop	Stop	Stop	Stop	Stop	500	20110	MARKET	11.5	
Traffic Vol by Lane		181	35	28	52	25	29	33	226					
T Vol		27	35	0	0	25	0	0	57	375	EWA.	1111		No.
Through Vol		120	0	28	0	0	29	0	155					
	777	34	0	0	52	0	0	33	14	CONTR	UTTE:	15.50	1 1 1 2	SPA
RT Vol														
		213	41	33	61	29	34	39	266					
ane Flow Rate	90:	213 5	41	33 5	61 5	29 5	34 5	39 5	266	100	LITES O	-		
ane Flow Rate Geometry Grp	97.			5				5		N.	113		illais	
ane Flow Rate Geometry Grp Degree of Util (X)		5	5	5	0.091	5	5	5 0 058	5	-11	113			Total S
ane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd)		5 0 318	5 0 075	5 0 056	0.091	5 0 054	5 0 058	5 0 058	0 402	arv.				
ane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N		5 0 318 5 368	5 0 075 6.582 Yes	5 0 056 6.072	5 0 091 5.358	5 0 054 6.635	5 0 058 6 124	5 0 058 5.41	5 0 402 5.443					
ane Flow Rate Geornetry Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N Cap		5 0 318 5 368 Ves 662	5 0 075 6.582 Yes 547	5 0 056 6.072 Yes 593	5 0 091 5.358 Yes 672	5 0 054 6.835 Yes 543	5 0 058 6 124 Yes 588	5 0 058 5.41 Yes 665	5 0 402 5.443 Yes 654	a W				
RT.Vol. ane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N Dap Convergence, Time HOM Lane V/C Ratio		5 0 318 5 368 Ves 662 3 165	5 0 075 6.582 Yes 547 4 285	5 0 056 6.072 Yes 593 3 775	5 0 091 5.358 Yes 672 3 061	5 0 054 6.635 Yes 543 4 339	5 0 058 6 124 Yes 588 3 829	5 0 058 5.41 Yes 665 3 114	5 0 402 5.443 Yes 654 3 236					
ane Flow Rate Geornetry Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N Cap Service Time HCM Lane V/C Ratio		5 0 318 5 368 Ves 662 3 165 0 322	5 0 075 6.582 Yes 547 4 285	5 0 056 6.072 Yes 593 3 775	5 0 091 5.358 Yes 672	5 0 054 6.835 Yes 543	5 0 058 6 124 Yes 588	5 0 058 5.41 Yes 665	5 0 402 5.443 Yes 654					
ane Flow Rate Geornetry, Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N Cap Service Time		5 0 318 5 368 Ves 662 3 165	5 0 075 6.582 Yes 547 4 285 0 075	5 0 056 6.072 Yes 5#3 3 775 0.058	5 0 091 5.358 Yes 672 3 061 0 091	5 0 054 6.635 Yes 543 4 339 0.053	5 0 058 6 124 Yes 588 3 829 0.058	5 0 058 5.41 Yes 665 3 114 0.059	5 0 402 5.443 Yes 654 3 236 0 407					

HCM 6th Signalized Intersection Summary 6 Central Ave & Hiller Rd

08/21/2024

	۶	-	7	1	+	1	1	†	-	1	1	1	
Movement	EBL	EBT	EBR	WEL	WEI	YER	NEL	ART	NER	SAL	SBT	888	
Lane Configurations	3	ţ,			4		N.	44		*	* 1		
Iraffic Volume (vervh)	25	1	69	2	1	0	51	428	- 1	3	505	20	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO
Future Volume (vehib)	25		69	2	1	.0	51	428	3	3	505	20	
Initial Q (Qb), yeh	0	10	0	0	0	0	0	0	G.	- 0	0	0	STATE OF THE PARTY OF
Ped Bike Ad(A pbT)	0 98	-	1 00	0.98		1.00	1.00	-	1 00	1.00		0 98	
Parking Bus, Ani	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1.00	
Work Zone On Approac		No	o alasa		No		-	No	-		No		
Adi Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	STATE OF THE PARTY
Adi Flow Rate vehin	27	1	0	2	1	0	55	465	2	3	549	18	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	SHIP TO YEAR
Percent Heavy Veh. %	2	-2	2	2	2	2	2	2	2	2	2	2	-
Gap veryh	320	90	0	258	24	0	88	1685	7	6	1448	47	THE COST STREET
Arrive On Green	0.05	0.06	0.00	0.05	0.05	0.00	0.05	0 46	0 46	0.00	0.41	0.41	- I Day of the last of the las
Sat Flow, veh/h	1391	1870	0	1003	501	0	1781	3629	16	1781		115	CONTRACTOR OF THE PARTY OF THE
Grp Valume(v), wet/it	27	1	0	3	0	0	55	228	239	3	278	289	
Grp Sat Flow(s), veh/h/h		1870	0	1504	0	0	1781	1777	1867	1781	1777	1847	A STATE OF THE OWNER,
Q Serve(q s), s	0.5	0.0	0.0	0.1	0.0	0.0	09	23	2.3	0.0	31	31	Colon Street, Street,
	0.5	0.0	0.0	01	0.0	0.0	0.9	23	23	0.0	31	31	
Cycle Q Clearin c), s	1 00	4.0			0,0	0.00		2.3			3.1		
Prop In Lane		90	0 00	0 67	S. Carry		1 00 88	0.00	0 01	100	740	0 06	-
Lane Grp Cap(c), velvh					0	9		815	857		733	762	
V/C Ratio(X)	0 08	0 01	0 00	0 01	0 00	0.00	0 62	0.28	0.28	0 48	0.38	0 38	
Avail Cap(c_a), veh/h	1906	2224	0	2016	D	0	1806	3106	3265	1806	3106	3229	The same of the sa
HCM Platoon Rabo	1.00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1.00	1 00	00 1	1 00	
Upstream Filter(I)	100	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	No. of Concession, Name of Street, or other party of the Concession, Name of Street, or other pa
Uniform Delay (d) s/vel		130	0.0	130	0.0	00	133	48	4.8	14.2	5.8	5.8	
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.0	0.0	0.0	2.7	0.3	0.3	19.9	0.6	0.5	STATE OF THE OWNER, WHEN
Inibat Q Delay(d3), sivet		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), vet		00	0.0	0.0	0.8	0.0	0.3	0.4	0.4	0.0	0.6	06	lange distance
Unsag Movement Delay						41.0							
LnGrp Delay(d) sNeh	13.4	13.0	0.0	13.0	0.0	0.0	16.0	5.1	51	34.1	6.4	6.4	
LnGrp LOS	В	8	A	В	A	Α	В	A	A	C	A	A	
Approach Vol. veh/h		28			3			522		100	570	ALIENS .	
Approach Delay, siven		13.3			13.0			63			6.5		
Approach LOS	-	B	Ų.	0.4	B	188		A	1	THE N	A		
Timer - Aneigned Pro-	3	2	100	- 4	5	10	47	8	5.08	100	stale i		
Phs Duration (G+Y+Rc)	84.6	17.8	to a	0.4	5.9	16.3		6.4	JEE!	No.	L.F.		
Change Period (Y+Rc),		45		50	4.5	45		50					
Max Green Setting (Gm	8,636	50.0		34.0	29.0	50.0		34.0	17.55		D fe	Total S	
Max Q Clear Time (q_c-		43		7.5	29	51		21					
Green Ext Time (p_c), s		5.2	0.50	0.1	0.1	5.6	Hill	0.0	1.00	LLE	1114	0.0	بالرجية حرالي
Mesococo Summity	Au Z				Agra	-					E FE		
ICM 6th Ctrl Delay	Sec.	1,3532	8.6	200	7		37 10	700		Per III	AF I	1 200	
HCM 6th LOS			A										

Traffic Operations Study for the MicKinleyville Town Center Project Wi Trans

AM Existing Page 5

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Existing Page 6

HCM 6th TWSC 7 McKinleyville Ave & Hayes Rd/Heartwood Dr

		12		

Lane Configurations Tradic Vol., vehin Future Vol., vehin RT Channel Ered Storage Length Veh in Median Storage, # Grade, % Peak Hour, Fador Heavy Vehicles, % Mwmt Flow Ms.or Minor Conflicting Flow Atl Stage 2 Critical Howy Stage 2 Critical Howy Stage 2 Critical Howy Stage 1 Critical Howy Stage 2 Critical Howy Stage 2 Critical Howy Stage 1 Stage 2 Follow up Howy Stage 1 Stage 2 Flexon up Netwo	85 2 8	EMT 5 5 6 6 52 6 6 52 6 6 52 6 6 52 6 6 52	7 7 8 Stop None 85 2 8	266 3 3 Stup 855 2 31 525 367 367 367 367 367 367 367 367 367 367	Water 2 2 2 0 Shap - 0 0 85 2 2 2 518 158	49 49 3 3 Slop None 85 2 58	#BL 5 5 0 Free 5 5 2 6 6 1 210	NBT 115 115 0 Free 0 0 0 85 2 135	13. 13. 13. Free None 85. 2. 15.	88L 61 61 7 85 72 85 72	88T 178 178 0 Free 0 0 85 209	SBR 6 6 0 Free Name 8 2 7			
Lane Configurations Traffe Vol. yeabh. Furture Vol. yeahh. Furture	7 7 7 85 85 2 8 8 545 357 188	55 0 5ton 0 0 65 2 6	7 7 8 Stop None 85 2 8	26 28 3 Situp 85 2 31 525 158	2 2 2 0 Shap 0 0 85 2 2 2 518 158	49 49 3 Stop None 85 2 58	5 5 6 85 2 6 6	115 115 0 Free 0 0 85 2 135	13 13 Free None	61 61 7 Free 85 2 72	178 178 0 Free 0 0 0 85 209	6 6 0 Free Name 85 2 7			
Traffe Vol., webh Conflicting Pools, My Son Control Extra Contr	7 0 Stop 85 2 8 8 545 357 188	5 5 6 6 522 357 165	7 D Stop None 85 2 B 216	26 3 Sitap 85 2 31 525 158	2 2 0 Situp 0 0 85 2 2	49 3 Stop None 85 2 58	Free B5 2 6	115 115 0 Free 0 0 85 2 135	13 Free None 85 2 15	85 72	178 178 0 Free 0 0 85 2 209	6 0 Free Name 85 2 7			
Conflicting Plotting Sign Control RT Channel Ered RT Channel Ered Storage Length Veh in Median Storage, # Grade, % Peak Hour Fautor Heavy Vehices, % Mymt Flow Layor Minot Conflicting Flow Ad Stage 2 Chitical Hawy Control Conflicting Flow Ad Conflicting Flow Ad Stage 2 Chitical Hawy Control Conflicting Flow Ad Stage 2 Chitical Hawy RT Chitical Hawy RT Chitical Hawy RT Chitical Hawy RT Stage 1 Stage 2 Flexion brocked	7 0 Stop 85 2 8 8 545 357 188	5 5 6 6 522 357 165	7 D Stop None 85 2 B 216	26 3 Sitap 85 2 31 525 158	2 0 Situp 0 0 85 2 2 2	49 3 Stop None 85 2 58	Free B5 2 6	115 0 Free 0 0 85 2 135	13 Free None 85 2 15	85 72	0 Free 0 0 0 85 2 209 0	6 0 Free Name 85 2 7			
Conflicting Peets, (M) Sign Control R Tohannel Ered Storage Length Veh in Median Storage, (#) Grade, % Grade, % Grade, % Heavy Vehicles, % Month Flow Month Flow Month Flow Mayor Minor Conflicting Flow AB Stage 1 Stage 2 Critical Heavy Sig 1 Critical Heavy Sig 1 Critical Heavy Sig 2 Critical Heavy Sig 1 Critical Heavy Sig 1 Follow up Heavy Stage 1 Stage 2 Pleason brocked %	85 2 8 85 2 8 8 85 2 8 8 8 8 8 8 8 8 8 8	5 0 5top 0 0 65 2 6	D Stop None 85 2 8	85 2 31 525 158	0 Stup 0 0 85 2 2 2 518 158	3 Stop None 85 2 58	Pree 85 2 6	0 Free 0 0 85 2 135	Free None 85 2 15	85 72	0 Free 0 0 85 2 209	0 Free Norm 85 2 7			
Sign Control RT ChannelEred Storage Length Veh in Median Storage, # Grade, % Peak Hour Faidor Heavy Vehicles, % Mymit Flow MayorMinot Conflicting Flow AB Stage 1 Stage 2 Chitral Howy Tonibon Howy	85 2 8 85 2 8 188 188 188 188 188 188 188 188 188	5ton 0 0 65 2 6	Stop None 85 2 8	85 2 31 525 158	0 0 0 85 2 2 2 518 158	Stop None 85 2 58	Free B5 2 6	0 0 0 85 2 135	Free None 85 2 15	85. 72.	0 0 85 2 209	Free Name 85 2 7			
R Channel Ered Storage Length Veh in Median Storage, # Grade, % Peak Hour Faidor Heavy Vehicuse, % Month Flow	85 2 8 8 10072 545 357 188	0 0 65 2 6 522 357 165	None 85 2 8	85 2 31 525 158	0 0 85 2 2 2 518 158	None 85 2 58	95 2 6	0 0 85 2 135	None 85 2 15	85 2 72	0 0 85 2 209	85 2 7		SAU SAU	20
R Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicuss, % Mmrl Flow Mmrl Flow Storage 1 Storage 2 Cinitized Heavy Cinitized Heavy Cinitized Heavy Storage 2 Cinitized Heavy Storage 2 Following Heavy Storage 1 Storage 2 Following Heavy Storage 1 Storage 2 Following Heavy Storage 1 Storage 2 Flemon brocked %	85 2 8 8 70072 545 357 188	522 357 165	#5 2 8	85 2 31 525 158	0 85 2 2 2 518 158	85 2 58	85 2 6	0 85 2 135	85 2 15	85 2 72	0 85 2 209	85 2 7		WAU	20
Veh in Median Storage, # Grade % Peak Holy Faither Heavy Vehicles % Morni Flow Lagor/Minor Morni Flow Stage 1 Flow Stage 1 Flow Stage 2 Flow Flow Flow Stage 3 Flow Stage 3 Flow Stage 2 Flow Flow	85 2 8 mor2 545 357 188	522 357 165	85 2 8 216	85 2 31 525 158	0 85 2 2 2 518 158	85 2 58 149	85 2 6	0 85 2 135	2 15	85 2 72	0 85 2 209	85 2 7	IIO E	e/AU	20
Veh in Median Storage, # Grade, % Peak Hour Faidor Heavy Vehicles, % Mym1 Flow AssortMinot Conflicting Flow Atl Storage 2 Critical Heavy Stg 1 Critical Heavy Stg 2 Critical Heavy Stg 1 Critical Heavy Stg 2 Critical Hea	85 2 8 mor2 545 357 188	522 357 165	85 2 8 216	85 2 31 525 158	0 85 2 2 2 518 158	85 2 58 149	85 2 6	0 85 2 135	2 15	85 2 72	0 85 2 209	85 2 7		eau La	20
Grade, % Peak Hour Factor Heavy Vehicles, % Worm Flow Stope I Stope 2 Stope 2 Stope 2 Stope 2 Stope 2 Stope 3 Stope 3 Stope 3 Stope 4 Stope 4 Stope 4 Stope 4 Stope 5 Stope 6 Stope 6 Stope 6 Stope 7 Stope 1 Stope 6 Stope 7 Stope 6 Stope 7 Stope 6 Stope 7 Stope 6 Stope 7 Stope 6 Stope 7 Sto	85 2 8 mor2 545 357 188	522 357 165	2 8 216	2 31 525 158	85 2 2 518 158	58 149	6 dayor1	85 2 135	2 15	72	85 2 209	7.	I STA		
Peak Hour Fautor Heavy Vehicles 18 Morn Flow Conflicting Flow Atl Shape 1 Shape 1 Shape 2 Critical Howy Critical Howy Pel Cape I Maneuver Shape 1 Shape 1 Shape 2 Flexon the Howy Shape 1 Shape 1 Shape 1 Flexon the How	2 8 nor2 545 357 188	522 357 165	2 8 216	2 31 525 158	2 2 518 158	58 149	6 dayor1	135	2 15	72	209	7.	ISTR VALSE		
Heavy vehicles ** Mymf Flow AB Conflicting Flow AB Stage 1 Stage 2 Critical Howy 7 Critical Howy 70 Critical Howy 512 6 Following Howy 512 7 Following Howy 512 7 Stage 2 Flemon brocked **	2 8 nor2 545 357 188	522 357 165	2 8 216	31 525 158	518 158	149	6 Jayort	135	15	72	209	7.	IBST S		
Mymifflow Assortation Conflicting Flow AB Stage 1 Stage 2 Critical Hoby 7 Critical Hoby 5g 2 Critical Hoby 5g 2 Follow in Hoby	8 nor2 545 357 188	522 357 165	216	31 525 158	518 158	149	6 Jayort	135	15	72	209	7.	IBID		
Conflicting Flow All Stage 1 Stage 2 Critical Hody Stg 1 Critical Hody Stg 1 Critical Hody Stg 1 Critical Hody Stg 1 For Day Stg 1 Cap-1 Management Stage 1 Stage 2 Flemon booked	545 357 188	357 165	216	525 158	158	149					0				
Conflicting Flow All Stage 1 Stage 2 Critical Hiday Critical Hiday 5tg 1 Critical Hiday 5tg 1 Critical Hiday 5tg 2 Critical Hiday 5tg 2 Critical Hiday 5tg 2 Critical Hiday 5tg 2 Tollow up Hiday Stage 1 Stage 2	545 357 188	357 165	216	525 158	158	149									
Conflicting Flow All Stage 1 Stage 2 Critical Hody Stg 1 Critical Hody Stg 1 Critical Hody Stg 1 Critical Hody Stg 1 For Day Stg 1 Cap-1 Management Stage 1 Stage 2 Flemon booked	545 357 188	357 165	216	525 158	158	149									
Stage 1 Stage 2 Stage 2 Critical Howy Stg 1 Critical Howy Stg 1 Critical Howy Stg 2 Critical Howy Stg 2 Critical Howy Stg 2 Critical Howy Stg 2 Stage 1 Stage 2 Planoon brocked, %	357 188	357 165		158	158		210	,	4	Torol					
Stage 2 Critical Holdy Sty 1 6 Critical Holdy Sty 1 6 Critical Holdy Sty 2 6 Follow up Holdy Sty 2 7 Follow up Holdy 3 Pol Cap-1 Manager Stage 1 1 Stage 2	188	165	- 4						-		-				#3°0
Critical Holey Sty 1 6 Critical Holey Sty 1 6 Critical Holey Sty 2 6 Fortow up Holey 3 Pol Cap-1 Manager Stage 1 Stage 2			- TATE OF STREET		360	-		9=2	-		-		2340		
Critical Howy Sty 1 6 Uniting Holmy Sty 2 6 Follow up Holmy 3 3 Pot Cap-1 Manageurs Stage 1 Stage 2	1 16		5.22	7.12	6.52	ñ 22	4.12	-	-	4.12	N/A		-	-	
Critical Holley Sig 2 6 Follow up History 3 Pot Cap-1 Manduser Stage 1 1 Stage 2 1 Plemon brocked 1	6 12	5 52	HIER	6 12	5 52	19.22	HILE		-	4114	-	-		-	
Follow up Hishey 3 Pot Cap-1 Manduver Stage 1 Stage 2	6.12	5 52	-	8 12	5.52	100	-		-	B10020	100	-		-	CE OF
Pol Cap-1 Manager Stage 1 Stage 2 Placeon blocked %			3 318	3.518	4 018	3 318	2 218	-	ALC: N	2 218		100	-		
Stage 1 Stage 2 Placon booked *			824			898		-		1428		-	-	OUNC 2	-
Stage 2	449 661	459 628	D/4	463 844	462 767	898	1354		-	1520	10	-		ALIE	
Placon blocked, %			-			-	-	-	-	100	- W	-	-	-	-
	814	762	HIE	653	626	4			- 6	110	- 7	111	a least a		70.1
	007	100	-	100	400		Invia	-	-	view.	-			_	
	397	429	822	429	432	893	1354	-	1000	1424	173	650			-1
	397	429	-	429	432		-		_	-	. *	. +	_		_
	658	592	-	637	761		-	100	- 6		- 10		- 21		
Stage 2	753	756		601	590	-	-	-	-	1	-	-	_	Maria	
			-				-		-			Co. Callan			
Approxim	EB			WB.			Nit			SB					
HEM Control Delay a 1	12.5		alma i	11.5	Title.	-	0.3	-	191	1.9				-	
HCM LOS	В			8											
THE RESERVE					100		1117	STE							
Minor Lune/Major Mirrid		NHL	WRT	NAME A	EBLINK	VRI'nt	.68L	187	BBR	H. Car	0.00		NEED IN		
Capacity (veh/h)	501/	1354		77.77	503	641	1424	-	-	1-1-4	A COLUMN				
HCM Lane V/C Ratio		0 004		months.		0.141	0.05	7/	-					-	
HCM Control Delay (s)	-	7.7	ō	-	12.5	11.5	7.7	6	-		100	-		12-0	
HCM Lane LOS		A.A.	A	75/5	8	8	A	A	-	-	Til, total			H-STATE OF	
HCM 95th %die Q(voh)		0	A	-	0.1	0.5	0.2	Ph.	-		-	-	and the same	-	_

HCM 6th Signalized Intersection Summary 8 Central Ave & Heartwood Dr

08/21/2024

	*	>	1	1	4-		1	1	-	1	1	1
Movement	EBL	EBI	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	681	583
Lane Configurations		-4-			4		*	4%		*	*5	
Traffic Volume (vieluh)	38	16	88	55	12	23	71	444	34	20	499	3
Future Volume (vith/h)	38	16	88	55	12	23	71	444	34	20	499	34
Initial Q (Qb), viin	0	0	0	0	0	0	0	0	0	0	0	(
Ped-Bike Adj(A pbT)	100		1 00	1 00		1.00	1 00		0 97	1 00		0.98
Parking Bus. Adi	1.00	1.00	1.00	100	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	-		No			No	
Adj Sat Flow, with him	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	17	0	57	12	8	74	462	27	21	520	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96-	0.96	0.96
Percent Heaw Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	43	0	303	22	14	108	1514	88	38	1387	75
Arrive On Green	0.09	0 09	0.00	0 09	0 09	0 09	0.06	0 44	0 44	0 02	0.41	0.41
Sat Flow, veh/h	1161	494	0	1173	247	165	1781	3407	199	1781	3425	184
Grp Volume(v) veh/h	57	0	0	77	0	0	74	240	249	21	269	279
Grp Sat Flow(s), vehilvin	1655	0	0	1584	0	0	1781	1777	1829	1781	1777	1832
Q Serve(q s) s	0.0	0.0	0.0	0.4	0.0	0.0	13	2.7	27	0.4	33	33
Cycle Q Clear(q_c) a	0.9	0.0	0.0	1.4	0.0	0.0	1.3	2.7	2.7	04	3.3	3.3
Prop In Lane	0.70	-	0.00	0.74	-	0.10	1 00		0.11	1 00	-	0 10
Lane Grp Cap(c), verilin	341	0	- 0	339	0	0	108	789	B12	38	720	742
V/C Rato(X)	017	0 00	0.00	0.23	0.00	0.00	0.69	0 30	0.31	0.55	0.37	0.38
Avail Cap(c_a), veh/h	1602	0	0	1571	0	0	1363	2493	2566	1363	2493	2571
HCM Platoon Rabo	100	1.00	1.00	1.00	1 00	1 00	1 00	1 00	1 00	1 00	1.00	1 00
Upstream Filter(1)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1,00	1.00	1.00	1.00	1.00
Uniform Delay (d), sNeh	13.5	0.00	0.0	136	0.0	0.0	14.4	5.6	56	15.2	6.5	6.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.5	0.0	0.0	7.5	0.5	0.5	11.9	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(56%) vet//in	0.3	0.0	0.0	0.5	0.0	0.0	0,6	0.6	0.6	0.2	0.8	0.8
Unsig Movement Delay siveh		0.0	0.0	0.0	0.0	0.0	9,0	9.4	0.0	4,2	9.0	V.0
LnGrp Delay(d), when	13.8	0.0	0.0	14.1	0.0	0.0	21.9	6.1	6.1	27.1	7.2	7.2
LnGrp LOS	В	A	A	В	A	A	C	A	A	C	A	A
Approach Vol., welsth		57	111		77	THE REAL PROPERTY.	10000	563	1111	The state of	569	-
Approach Delay sively		138		-	14.1	A COVACUI	800000	8.1			8.0	-
Approach LOS	E E E	8		-	B		-	A			A	
p P Proposition Comments	-		202	Market San		20.000	-			-	-0	
Timer - Assigned Phis	- 1	2	40	4	5	6		8				
Phs Duration (G+Y+Rc), s	5.2	18.9		7.3	6.4	17.7		7.3				
Change Period (Y+Rc), s	4.5	50		45	45	50	-	45		-		
Max Green Setting (Gmax), s	24.0	44.0	AL-	29.0	24.0	44.0		29.0	and the same	Six Per		
Max Q Clear Time (g_c+l1) s	24	47	_	2.9	33	53		34	-			
Green Ext Time (p_c), #	0.0	6.3	1=12	0.3	0.1	72		0.5	2011		20,12	
Intersection Surprisery			200		THE.			305	All Park			
HCM 6th Ctrl Delay			8.7			2545	-	SIN	110		Aprile.	
HCM 6th LOS			A									

Traffic Operations Study for the MicKinleyville Town Center Project W-Trains

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Existing Page 8

HCM 6th AWSC 1 McKinleyville Ave & Митау Rd

HCM 6th AWSC 2: Central Ave & Murray Rd

08/21/2024

Mersection		44,65									100	1
Intersection Delay, s/veh	10.9											
Intersection LOS	8	W-47	pul s	Pay.		(Jerti		N 18			/III	
Movement	TEBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	381	881	886
Lane Configurations	7	† 1.	- See See See	12	44	7,400		1			4	
Traffic Vol. velvh	86	281	163	38	183	16	69	35	39	7	31	2
Future Vol. veh/h	86	281	153	38	183	16	88	35	29	1	31	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mymt Flow	91	299	163	40	195	17	94	37	41	7	33	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	(
Acmosch	EB	100	TC-D	WE		100	NE		100	SB	-	-
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3	HOLD IN	SA SECTION AND PROPERTY.	3	CATES	CO LIA	1	ALC: UNITED N	HE SHOW	111	H051	EHT/H
Conflicting Approach Left	SB	Marie M		NB			EB	and course		WB		
Conflicting Lanes Left	1		2337	-	PAGE BA	P-FF	3	100	D 40		عاجم	300
Conflicting Approach Right	NB		_	SB		-	WB			EB		
Conflicting Lanes Right	1	Er e	PASSES.	1	STATE OF	S. S. S.	3	THE		3	- C	
HCM Control Delay	10.9			10.1			124		American desirable	10.2		-
HCM LOS		-1	THE REAL PROPERTY.	- 6		-14	В	100		В	EST!	OPEN.
Title	見き	NBLni	EBLoi	EBLn2	EBLn3				SBLnt		121	54
Vol Left, %		54%	100%	0%	0%	100%	0%	0%	12%			
Vol Thru, %		22%	0%	100%	38%	0%	100%	79%	53%			
Vol Right, %		24%	0%	0%	62%	0%	0%	21%	36%			
Sign Control		Stop	Stop	8top	Step	Stop	Stop	Stop	Step	-7.	Se 2	
Traffic Vol by Lane		162	B6	187	247	38	122	77	59			
T Vol	DOM:	88	86	0	0	38	0	0	7	Elan de		
Through Vol		35	0	187	94	0	122	61	31	1000		
RT Vol	and the same of	39	0	0	153	0	0	18	21	-		
Lane Flow Rate		172	91	199	262	40	130	82	63			
Geometry Grp		- 5	5	- 5	5	5	5	5	5			
Degree of Util (X)		0.316	0 158	0 315	0.383	0.074	0 218	0 134	0 114			
Departure Headway (Hd)		6,603	8.205	5 698	5.268	6,548	5.04	5.892	6.559	-6		1445
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Сар		545	578	832	885	547	594	608	546	15 17		
Service Time		4 342	3 938	3 431	2 991	4.287	3 779	3 631	4 307			
HCM Lane V/C Ratio		0.316	0.157	0.315	0 382	0.073	0.219	0.135	0.115	200		200
ICM Control Delay		12 4	10 1	11	11.2	9.8	105	95	10.2			
ICM Lane LOS	Carrier I	В	В	В	8	A	В	A	В	ME		
HCM 95th-tile Q		1.3	0.6	13	1.8	0.2	0.8	0.5	0.4			

									_	_		_	
Intersection	2.35	335		JAN.	510	ie I	l Barre	all S			118		Jan Jan
Intersection Delay, s/ve	h137												
Intersection LOS	8	100		N.E	E H	1112	911	-		S 815		100	
Movement	EBL	FBT	EBR	WEL	WBT	WER	NBL	NBT	NBR	SEL	SBT	SBR	Carried States
Lane Configurations	ħ		7	P	1		7	4		7	4	*	
Traffic Vol, veh/h	74	39	159	35			147	270	61	8	175	49	W-100
Future Vol. veh/h	74	39	159	35	23	. ?	147	270	51	8	175	49	
Peak Hour Factor	0.98	0 98	0.98	0.98	0.98	0.98	0.98	0,98	0.98	0.98	0.98	0.98	To all the last
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Myrnt Flow	76	40	162	36	23	7	150	276	62	. 8	179	50	-
Number of Lanes	1	1	1	.1	. 1	0		1	0	1	1	1	
Approach	EB	200	170	WB	102	E	NB		200	SB	No.	-	a Ne
Opposing Approach	WB	= =		EB			SB			N8			
Opposing Lanes	2			3			3			2	Sin I		- PRINCE
Conflicting Approach Le	R SB			NB			EB	_		WB			
Conficting Lines Left	3.			2		MILE	13			2	. 511		U STORY
Conflicting Approach Ru	ghNB			SB			WB			EB			41
Conflicting Lanes Right	2			3			2			3			100
HCM Control Delay	11.5			11.1			15.9			124			
HCM LOS	8			B			C			В			
Lane		leLn!	NBL/n2	EBL m	EBIIn/2	EBuna	Ween	Welling	Seems	HHLA2	BERT		ELIS.
Vol Left, %		100%	0%	100%	0%	0%	100%	0%	100%	0%	0%		
Vol Thru, %		0%	82%	0%	100%	0%	0%	77%	0%	100%	0%	Market Land	
Vai Right, %		0%	18%	0%	0%	100%	0%	23%	0%	0%	100%		
Sign Control		Stop	Stop	5top	Stop	Stop	Stop	Stop	Stop	Stop	Stop	WELLS SHOW	
Traffic Vol by Lane		147	331	74	39	159	35	30	8	175	49		
LT Vol	100	147	0	74	0	0	35	0	8	0	0	A STATE OF	
Through Vol		0	270	0	39	0	0	23	0	175	0		
RT Vol		0	81	0	0	159	0	7	0	0	49		100
Lane Flow Rate		150	338	76	40	162	36	31	В	179	50		
Geometry Grp		6	δ	6	6	6	8	8	8	0	6		12 5
Degree of Util (X)		0.285	0 583	0 157	0 077	0.283		0.063		0.343	0.086		
Departure Headway (Ho	9	6.846	5.212	7,489	8.984	6.276	8118	7.443	7.411	6.905	6.196	THE REST	
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Сар		572	578	470	509	568	444	484	480	518	574	1000	
Service Time		4.621	3 986	5.279		4.065	5818	5 143	5.2	4.694	3 985		
HCM Lane V/C Ratio		0.287	0.585	0.16	0.079	0,285	0.081	0.064	0.017	0.346	0.087		
HCM Control Dumy		12.4	174	11:7	10 4	11.6	11.5	10.6	103	13.3	96		
HCM Lane LOS		В	C	8	В	В	8	В	B	В	A		5 6
HCM 95th file O		1.2	37	0.5	0.2	1.2	03	0.2	0.1	1.5	0.3		

Intersection Int Delay, s/veh

Approach
HCM Control Delay, s
HCM LOS

Minor Lane/Major Mynt	NBL	MBT	NBR	EBLn1	NBLn1	SBL	SBT	SBR	
Capacity (veh/h)	1335	- 3	100	522	524	1285	-	- 1	
HCM Lane V/C Rabo	0.003		-	0019	0.124	0 022			
HCM Control Delay (s)	7.7	0		12	12.8	7.9	0		
HCM Lane LOS	A	A	4	B	Ħ	A	A		
HCM 95th %tile Q(veh)	0	- 5	1114	0.1	0.4	0.1	-		

HCM 6th Signalized Intersection Summary

4 Central Ave & Railroad Dr

08/21/2024

	,	-	7	1	4		1	1	-	1	+	1
Movement	EBL	EBT	EBR	WEL	WBT	WBR	NBL	NBT	NBR	EBL	581	SBB
Lane Configurations	7	30			4		7	41		- 5	ħ	
Traffic Volume (veh/h)	17	8	44	28	6	10	50	567	18	5	417	22
Future Volume (veh/h)	17	8	44	28	6	10	50	567	18	5	417	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0 98		1 00	0.98		1 00	1 00		0 97	1 00		0 96
Parking Bus, Adi	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, velvivin	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate veh/h	19	9	0	31	7	0	55	623	17	5	458	21
Peak Hour Factor	0.91	0.91	0.91-	0.91	0.91-	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, velvh	387	241	0	321	54	0	84	1674	46	10	766	35
Arrive On Green	0 13	0 13	0.00	0 13	0 13	0.00	0 05	0 47	0.47	0.01	0 43	0.43
Sat Flow, veh/h	1385	1870	0	1070	421	0	1781	3531	96	1781	1771	81
Grp Volume(v), veh/h	19	9	0	38	0	0	55	313	327	5	0	479
Grp Sat Flow(s), veh/h/n	1385	1870	0	1491	0	0	1781	1777	1850	1781	0	1852
Q Serveta s) s	0.0	0.2	0.0	0.3	σσ	0.0	11	40	40	01	0.0	7 1
Cycle Q Clear(g c), s	0,3	0.2	0.0	0.7	0.0	0.0	11	4.0	4.0	0.1	0.0	7.1
Prop In Lane	1.00		0.00	0.82		0 00	1 00		0.05	1 00		0.04
Lane Grp Cap(c), velvh	387	241	0	375	0	0	84	843	877	10	0	801
V/C Rato(X)	0 05	0 04	0.00	0 10	0.00	0.00	0.66	0 37	0 37	0 52	0 00	0.60
Avail Cap(c_a), veh/h	1603	1883	0	1648	0	0	1196	2485	2587	1196	0	2590
HCM Platoon Ratio	1 00	1.00	1.00	1 00	100	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	137	136	0.0	13.9	0.0	00	168	60	60	177	0.0	78
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.5	0.5	37.0	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/in	0.1	0.1	0.0	0.2	0.0	0.0	0,6	0,9	1.0	0.1	0.0	1.9
Unsig Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	13.7	0.0	13.9	0.0	0.0	25.1	6.5	6.5	54.7	0.0	9.0
LnGm LOS	В	В	Α	8	Α	A	C	Α	A	D	A	A
Approach Vol. veh/h	NAME OF TAXABLE PARTY.	28		100	38	- 12	200	695	- 1 Table 2 C		484	
Approach Delay s/veh		137			139			79			95	
Approach LOS		В			В			_ A			A	
Timer - Assigned Phs	-41	2	-3	4	5	8		8	1-1-2			
Phs Duration (G+Y+Rc), s	4.7	21.5	بالمجهد	9.6	6.2	20.0		9.6		231	digital.	
Change Period (Y+Rc), s	4.5	45		5.0	45	45		50				
Max Green Setting (Gmax), s	24.0	50.0		36.0	24.0	50.0		36.0				
Max Q Clear Time (q. c+i1), E	21	60		2.3	31	9.1		27				
Green Ext Time (p_c), s	0.0	7.8	# 1 5 P	0.0	0.1	5.8	52.0	0.1	- 4		7	
Intersection Summary				SE.	ويتأل	95		MILO		Line		
HCM 6th Ctrl Delay	ALCOHO	Allegan	8.8	1	1		44.74		West of the last	the little		
HCM 6th LOS			A									

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Traffic Operations Study for the Mickinleyville Town Center Project

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HCM 6th Signalized Intersection Summary 6. Central Ave & Hiller Rd

08/21/2024

	۶	-	•	1	-	*	1	1	-	1	1	1	
Movement	EBL	EHT	EBR	WEL	TYRE	WIR	NBL	NET	NBR	SBL	TES	SER	S. C. Control
Lane Configurations	35	14			4		M	At.		×	45		
Traffic Volume (veryth)	39	- 5	104	10	5	2	114	743	21	12	574	34	
Future Volume (ven/h)	39	5	104	10	5	2	114	743	21	12	574	34	
Initial O (Ob), veh	0	0	0	. 0	0	0	0	0	0	0	0	0	RESIDENCE OF STREET
Ped-Bike Adi(A pbT)	0.98		1 00	0.98		1 00	1.00		0.97	1.00		0.97	
Parking Bus, Adi	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	SECTION STATES
Work Zone On Approach	h	No	-		No	1000		No			No		The second second
	1670	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	I WAS ALL OWNERS.
Adi Flow Rale, veh/h	42	5	0	11	5	0	124	808	20	13	624	30	
	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.92	CONTRACTOR OF SECTION
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, velvh	319	150	0	248	49	0	161	1795	44	24	1481	71	The District Law of
Arrive On Green	0.08	0 08	0.00	0.08	0.08	0.00	0.09	0.51	0.51	0.01	0.43	0.43	and the same of th
	1386	1870	0	934	609	0	1781	3540	88	1781		185	and the same of the same
Grp Voiume(v), yeh/h	42	5	0	16	0	0	124	405	423	13	322	332	
Grp Sat Flow(s), vin/h/h		1870	0	1543	0	0	1781	1777	1851	1781	1777	1834	CONTRACTOR AND PARTY.
Q Serve(q, s), s	0.7	01	0.0	0.0	0.0	0.0	2.4	51	51	03	44	44	TO LOCAL TO SERVICE AND ADDRESS OF THE PARTY
Cycle Q Clear(q_c), s	0.9	0.1	9.0	0.3	0.0	0.0	24	5.1	5.1	0.3	44	44	
Prop in Lane	1 00	0.1	0.00	0.69	0.0	0.00	1 00	0.1	0.05	1 00	4.4	0.09	
Lane Grp Cap(c), velvh		150	0	297	0	2	161	901	938	24	764	788	
	0 13	0.03	0 00	0.05	0.00	0 00	0.77	0.45	0.45	0.54	0.42	0 42	
	1552	1814	0	1638	0	0	1473	2534	2639	1473	2534	2615	STORY STREET
HCM Platoon Ratio	1 00	1 00	1.00	1.00	1 00	1.00	1 00	1.00	1 00	100	1 00	1.00	
	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	THE PERSON NAMED IN
Uniform Delay (d), s/veh		14.9	0.0	15.0	0.0	0.0	15.6	55	5.5	17.2	7.0	7.0	-
Incr Delay (d2), s/veh	0.3	01	0.0	0.1	0.0	30	29	0.6	0.6	67	0.6	0.6	The state of the s
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Mile BackO/D(50%) veh		0.0	0.0	0.1	0.0	0.0	0.9	1.0	11	0.1	11	1.1	W. C. C. C.
Unsig Movement Delay			0.0	0.1	0.0	0,0	4.4	1.0	111	4.1	1.0	1.1	COLUMN TO SERVICE
LnGrp Delay(d),s/veh		15.0	0.0	15.1	0.0	0.0	18.5	6.1	6.1	23.9	7.6	7.6	-
LnGrp LOS	B	8	A	В	A	A	B	A	A	C	Α.	A	AND RESIDENCE
Approach Vol. velvh	-	47		В	16		D	952		-	667	A	
Approach Delay, sheh	-	15.4	-		15 1			77			79		CALVELLERAN
	-	10.4	or and	-	10 I			A	-	-	/ 9 A		
Approach LOS		0	es ma	-	D			A			A	44.4	
imer - Assigned Phs	-44	2		100	5	6		- 2			10		
this Duration (G+Y+Rc),		22.3		7.8	7.7	19.6		7.8					
Change Period (Y+Rc), s		45		50	45	4.5		50					
Max Green Setting (Gma		50 0	171	34.0	29.0	56.0		34.0		DOM:			MANAGE III.
Max Q Clear Time (g_c+		7.1		29	44	6.4		23					
Green Ext Time (p_c), s	0.0	10 7		0.2	0.1	7.8		01	100				HI WELL S
blemestion Euromany			2	d Unit	LW	U	AU.	410	N.		d U	38 p.	
ICM 6th Ctri Delay		III Iso	8.1	10543			E		200	4414	100	100	
HCM 6th LOS			A										

Traffic Operations Study for the Mickinleyville Town Center Project

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Traffic Operations Study for the Mickinleyville Town Center Project

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HCM 6th TWSC
7. McKinleyville Ave & Hayes Rd/Heartwood Dr

08/21	

PM Existing Page 7

Fuhre Vol vehith Conflicting Peds, #hir Sign Control Sign	E88 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Stop Nona 1 170 1 170 3 4	20 20 3 Step 2 22 Minut 1 283 268	WB1 4 4 (0 0 Stop 2 4 4 5 5 5 2 2 5 5 5 2 5 5 5 2	272	NBL 6 6 2 2 Free	NBT	NBR 27 27 3 Free None 89 2 30 0	SBL 43 43 1 Free 80 2 48 44 12 284 4 12	SB1 143 143 0 Free 0 0 0 89 2 2 161 0 0	SBR 7 7 7 2 Free Name 88 2 8		
Lane Configurations Infific Vol. veibth Futher Vol. veibth Sing Combot Storage Length Veib in Median Storage, # Grade. % Feak Hour Factor # Heavy Vehicles, % Mymrt Flow Major/Minor # Heavy Vehicles, % Mymrt Flow Mymrt Flow Major/Minor # Heavy Vehicles, % Mymrt Flow Mymrt Flo	560 Store	Stop Nona 1 170 1 170 3 4	20 30 5kp 22 22 Mark 1 551 283 268 7 12 6 12 6 12	00 Shop 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	599 599 3 Stop Nome 69 2 56	69 2 Free 89 2 7 Minjort	223 223 0 Free 0 0 0 89 2 251	27 27 3 Free None 89 2 30	43 43 3 Free 80 2 48 48	0 Free 0 0 0 89 2 161	Free None 90 2 8		
Traffic Vol., vehith Conflicting Peds, #thr Sign Combot Sign Combot Sign Combot Sign Combot Storage Length Vehin Median Storage, #f Grade, % Forade, % MayorMinor Minod Conflicting Flow All Sign Condicting Flow All Sign Condicting Flow All Sign 2 John Conflicting F	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	5 4 4 7 Stope Name Name 1 170 1 170 3 3 4 7 5 6 22 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	20 3 5kpp 22 22 Mmort 551 283 268 7,12 6,12 6,12	0 Stop 0 0 0 0 89 2 4 4 550 267 6.52 5 52 5 52 5 52	500 3 Stop Nome 85 2 56	6 2 Free 69 2 7	223 223 0 Free 0 0 89 2 251	27 3 Free None 89 2 30	43 3 Free 80 2 48 Anjor 2	143 0 Free 0 0 89 2 161	7 2 Free None 88 2 8		
contract vol verbit Conflicting Pedis #thr Sign Control S	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	5 4 4 7 Stope Name Name 1 170 1 170 3 3 4 7 5 6 22 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	20 3 5kpp 22 22 Mmort 551 283 268 7,12 6,12 6,12	0 Stop 0 0 0 0 89 2 4 4 550 267 6.52 5 52 5 52 5 52	500 3 Stop Nome 85 2 56	6 2 Free 69 2 7	223 223 0 Free 0 0 89 2 251	27 3 Free None 89 2 30	43 3 Free 80 2 48 Anjor 2	0 Free 0 0 89 2 161	7 2 Free None 88 2 8		
contract vol ventur Conflicting Peods, #filtr Sign Countrol Sign Countro	566 Store St	9 Stap 9 Stap Norma 10 Stap 10 Stap	59 22 22 22 23 268 7,12 6,12 6,12	0 5top 0 0 89 2 4 550 283 267 6.52 5.52 5.52	3 Stop Nome 89 2 96 2272	2 Free 89 2 7	0 0 0 0 89 2 251	Free None	80 2 48 48 284	0 0 0 89 2 161	Free None 88 2 8 8		
Sign Control Stoy RT Channeload Storage Length Verb in Median Storage, # Grade, % Peak Hoter Factor # Reak Hoter Factor # Stage 1 26. Stage 1 26. Stage 1 26. Critical Howy Stg 1 6. Fortical Howy Stg 2 6. Stage 1 79. Stage 2 69. Stage 1 79. Stage 2 79.	5to	Stop Norm	89 2 22 Minut 1 551 268 7 12 6 12 6 12	550 0 89 2 4 550 283 267 6.52 5.52 5.52	89 2 56	60 2 7 Minjort 171	0 0 0 89 2 251	Free None 89 2 30	80 2 48 48 48	0 0 0 89 2 161	Free None 88 2 8		
RT Channeload Storage Length Veh in Median Storage, # Grade: % Grade: % Grade: % Minter Factor Fleavy Vehicles, % Minter Flow Major/Minor Minter Min	56 3 26 3 26 3 29 2 6.5 2 5.5 3 4.0 1	None 10 10 10 10 10 10 10 10 10 10 10 10 10	551 283 268 7 12 6 12 6 12	0 0 89 2 4 550 283 267 6.52 5.52	89 2 56	89 2 7 Minjord 171	0 0 89 2 251	None 89 2 30	80 2 48 48 48	0 0 89 2 161	98 2 6		
Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Fleavy Vehicles, % Morni Flow Mor	3 26:53 3 26:55 2 6:55 2 5:55 3 4:018	1700 1700 1700 1700 1700 1700	551 283 268 7.12 6.12 6.12	0 89 2 4 550 283 267 6.52 5 52 5 52	89 2 56	09 2 7 Minjord 171	0 89 2 251	89 2 30	80 2 48 48 48	0 89 2 161	88 2 8		
Veh in Median Storage, # Crade. % Peak Hoter Factor feavy Vehicles, % Memmer Elow Major/Minor Minor Mi	3 26:53 3 26:55 2 6:55 2 5:55 3 4:018	0 80 0 80 2 2 3 3 4 1 170 3 -3 3 -3 2 622	551 283 268 7,12 6,12 6,12	0 89 2 4 550 283 267 6.52 5 52 5 52	89 2 58 272	09 2 7 Minjord 171	0 89 2 251	89 2 30	80 2 48 48 284	0 89 2 161	88 8		Appl
Grade, % Peak Hour Factor 8 Heavy Vehicles, % Mymt Flow Major/Minor Minor Mymt Flow 81 S889 1 265 S889 1 265 S889 2 311 Critical Howy Stg 1 617 Critical Howy Stg 2 617 Critical Howy Stg 3 617 Crit	3 26:53 3 26:55 2 6:55 2 5:55 3 4:018	0 80 0 80 2 2 3 3 4 1 170 3 -3 3 -3 2 622	551 283 268 7,12 6,12 6,12	0 89 2 4 550 283 267 6.52 5 52 5 52	89 2 58 272	09 2 7 Minjord 171	0 89 2 251	89 2 30	80 2 48 48 284	0 89 2 161	88 8		
Peak Hour Factor Heavy Vehicles, % Heavy Vehicles, % Hour Flow Magori Minor Conflicting Flow Atl Stage 1 Stage 2 311 Critical Holwy Stg 1 Critical Holwy Stg 2 Critical Holwy Stg 2 Critical Holwy Stg 2 Stg 3 Stg 2 Stg 3 Stg 3 Stg 4 Stg 4 Stg 2 Stg 2 Stg 2 Stg 4 Stg 5 Stg	1 56 3 26 3 29 2 6.5 2 5.5 2 5.5 3 4.0 1	1 170 3 4 1 170 3 - 3 - 2 622	551 283 268 7 12 6 12 6 12	550 283 267 6.52 5.52 5.52	2 58 272	Atmiort 171	251	89 2 30	2 48 48 48 48 48 284	89 2 161	8 8		
Heavy Vehicles, % Mymt Flow MapriMinor Stage 1 Stage 2 Chitical Howy Stg 1 Chitical Howy Stg 1 Chitical Howy Stg 2 Chitical Howy Stg 3 Stg 1 Stg 1 Stg 3 Stg 3 Chitical How Stg 3 Stg 4 Stg 4 Stg 4 Stg 5 Stg 6 Stg 6 Stg 6 Stg 7	56 3 26 3 26 3 29 2 6.5 2 5.5 3 4.0 18	1 170 3 4 1 170 3 - 3 - 2 622	22 Mnx1 551 283 268 7 12 6 12 6 12	550 283 267 6.52 5.52 5.52	2 58 272	Atmiort 171	2 251	30	2 48 48 48 48 48 284	161	8 8		
Memit Flow Majoritem Flow Atl Stage 1 Stage 2 Stage 3 Stage 2 Stage 3 Stage 2 Stage 3 Stage 4 Stage 4	3 263 3 293 3 294 2 6.52 5 5.52 5 5.53 3 4.018	3 4 1 170 3 - 3 - 2 622	551 283 268 7,12 6,12 6,12	550 283 267 6.52 5.52 5.52	272	Majort 171	251	30	48 48/42/2	161	.0		
Minth Flow Majori Minor Conflicting Flow Atl Singe 1 Stage 2 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Conteal Holwy Stg 1 Conteal Holwy Stg 1 Conteal Holwy Stg 1 Conteal Holwy Stg 2 For Flow up Holw 3 Stage 2 Flow Op Holmaneuver Stage 1 Flow Op Holmaneuver Stage 1 Stage 2 Stage 3 Stage 2 Stage 3 Stage 4 Stage 4 Stage 4 Stage 4 Stage 5 Stage 5	3 263 3 293 3 294 2 6.52 5 5.52 5 5.53 3 4.018	3 4 1 170 3 - 3 - 2 622	551 283 268 7,12 6,12 6,12	550 283 267 6.52 5.52 5.52	272	Majort 171	251	30	48 48/42/2	161	.0		
Conflicting Flow Atl S8 Slage 1 25 Slage 2 311 Cinican Holwy 71 Cinican Holwy Stg 1 612 Cinican Holwy Stg 2 67 Floliou put Holw 351 Slage 2 693 Plation tolicided % Mov Cap-1 Maneuver 368 Mov Cap-2 Maneuver 368 Mov Cap-2 Maneuver 368 Mov Cap-2 Maneuver 368 Slage 1 739 Slage 2 623	56 3 26 3 29 6 5 2 6 5 2 5 5 2 5 5 3 4 0 1	170	551 283 268 7,12 6,12 6,12	283 267 6.52 5.52 5.52	272	171	0		284				
Conflicting Flow Atl S8 Slage 1 25 Slage 2 311 Cinican Holwy 71 Cinican Holwy Stg 1 612 Cinican Holwy Stg 2 67 Floliou put Holw 351 Slage 2 693 Plation blocked % Mov Cap-1 Maneuver 368 Mov Cap-2 Maneuver 368 Mov Cap-2 Maneuver 368 Mov Cap-2 Maneuver 368 Slage 1 738 Slage 2 623	56 3 26 3 29 6 5 2 6 5 2 5 5 2 5 5 3 4 0 1	170	551 283 268 7,12 6,12 6,12	283 267 6.52 5.52 5.52	272	171	0		284				
Stage 1	3 265 3 291 2 6.52 5.53 2 5.53 3 4.018	622	283 268 7,12 6,12 6,12	283 267 6.52 5.52 5.52		-			- 4				
Stage 2	2 6.50 2 6.50 2 5.50 2 5.50 3 4.010	622	268 7,12 6,12 6,12	267 6.52 5.52 5.52	6.22	4.12		1	4.12	- 3	-		
Critical Holwy 5tg 1 615 Critical Holwy 5tg 1 615 Critical Holwy 5tg 2 6.11 Critical Holwy 5tg 2 6.11 Critical Holwy 5tg 2 6.11 Stage 2 615 Stage 2 693 Platoon tolcoked 4 Mov Cap-1 Maneuver 364 Mov Cap-2 Maneuver 364 Stage 2 623 Approach EE	6.53 5.53 5.53 4.018	5 22	7 12 6 12 6 12	6.52 5.52 5.52	6.22	4.12	9	Cyc.	4.12	- 3	No.		10000
Critical Howy Stg 1 6 Critical Howy Stg 2 6 Stg 2 6 Stg 2 6 Stg 2 6 Stg 2 7	5.50 5.50 4.010		612	5 52 5 52	0.22	3.12		1.00				2023	-0
Critical Holyy Sig 2 67: Polit Cap-1 Maneuver 42: Stage 1 58: Stage 2 69: Platon blocked % Mov Cap-1 Maneuver 36: Mov Cap-1 Maneuver 36: Stage 2 67: Stage 2 67: Approach EF	5.5		6.12	5,52	III/JS								
Follow up Howy 3511 POT Cap-1 Maneuver 422 Stage 1 74 Stage 2 693 Platoon blocked % 694 Mov Cap-1 Maneuver 365 Mov Cap-2 Maneuver 365 Stage 1 734 Stage 2 623 Approach EE	4.01						0.00	-	0.5	-00			
Pot Cap-1 Maneuver Stage 1 74/ Stage 2 69: Platoon blocked % 69: Mov Cap-1 Maneuver 368 Mov Cap-2 Maneuver 368 Stage 1 738 Stage 2 62: Approach		3 310		4 018	3 318	2 218	-	- 1	2218	- LA	1000		
Stage 1		8 H74		443	767	1406			1278	100	-	-	-
Stage 2 69: Platoon blocked % Mov Cap-1 Maneuver 36: Mov Cap-2 Maneuver 36: Stage 1 73k 54: Stage 2 62: Approach EE			724	677	101	1400	-		1210			HALL THE	
Platon blocked % Mov Cap-1 Maneuver 365 Mov Cap-2 Maneuver 365 Stage 1 736 Stage 2 625 Approach EE				688		-		-	-	-	-		
Mov Cap-1 Maneuver 355 Mov Cap-2 Maneuver 369 Stage 1 736 Stage 2 623 Approach E8	00	1.0	130	000		7.			- 11	11125			
Mov Cap-2 Maneuver 369 Stage 1 736 Stage 2 623 Approach EE	413	870	421	420	763	1403	-	-14	1274	-	-	-	2002000
Stage 1 736 Stage 2 623 Approach EE			421	420	100	1403	-		CONTROL	SCHOOL SECTION			
Stage 2 623						-	_	-	-	MILE PA	-	TT-MAKE B	-
Approach Ei			717	671	-	-				17.	-00		
	66	Series in the	698	658	exil	EEE	EDI	mi		311	مند		No.
			WB		(4.	NB.			58				
HCM Control Delay, s 12.4			11.9	UE IO	SIN.	0.2	ALL		1.8		-ALLAN	WHITE I	ALC: N
HCM LOS E			В										
Minor Lane/Major Ment	NBI	hBT	+iraca i	BLAN	MED and	SEL	RRT	SER.			-	-	
Capacity (veh/h)	1403		ane.	500	515	1274	un2	Mary .		-	- 12		
HCM Lane V/C Ratio			-	0.022	0 151	0 038	-	-		75.0			
HCM Control Delay (s)			-	124	119	7.9	0	-	-		-	-	
HCM Lane LOS	0 005												_
HCM 95th %tile Q(veh)	7.6			B	8	F,SI	A	-					

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

				_	+	4	-	†	-	1	1	1
		-+		4		-	7	_ /2	1		+	•
Movement	EBL	EBT	EBR	MBF	WBT	WBR	NBL	NB7	NBR	SBL	687	SBF
Lane Configurations		1			++++		7	45		٦	李节	
Traffic Volume (veh/h)	68	10	81	41	8	40	93	743	50	25	596	66
Future Volume (veh/h)	68	10	81	41	8	40	93	743	50	25	598	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	- 0	0	0	0	(
Ped-Bike Adj(A_pb1)	0 99		1 00	0 99		0 97	1 00		0.97	1.00		0 97
Parking Bus, Adj	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, vets/Mn	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate veh/h	75	11	0	45	9	6	102	816	47	27	655	59
Peak Hour Factor	0.95	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	- 2	2	2	2	2	2	2	2	2	2
Cap, velon	313	22	0	272	43	18	135	1757	101	48	1531	138
Arrive On Green	0.11	0.11	0 00	0 11	0 11	0 11	0 08	0.52	0.52	0.03	0 47	0 47
Sat Flow, vest/h	1334	200	0	1051	395	162	1781	3410	196	1781	3288	296
Grp Volume(v), veh/h	86	0	0	60	0	0	102	425	438	27	354	360
Grp Sat Flowts), velofulin	1534	0	0	1618	0	0	1781	1777	1829	1781	1777	1807
Q Serverio sil s	07	0.0	0.0	0.0	0.0	0.0	22	6.1	6.1	0.6	53	5.3
Cycle Q Clear(q_c), s	2.0	0.0	0.0	1.2	0.0	0.0	22	6.1	6.1	0.6	5.3	53
Prou In Lane	0.87	4.5	0.00	0.75	0.0	0.10	1.00		0 11	1 00	9.0	0.16
Lane Grp Cap(c), velvh	335	0	0	333	0	0	135	918	943	46	827	841
V/C Rato(X)	0.26	0.00	0.00	0.18	0.00	0.00	0.76	0.46	0.46	0.58	0.43	0.43
Avail Cap(c iii), viitsfii	1222	0	0	1237	- 0	0	1078	1957	2014	1070	1957	1990
HCM Platoon Ratio	1 00	1.00	1.00	1 00	100	1 00	1 00	1 00	1.00	1 00	1.00	1.00
Lipskeam Filler(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d) s/veh	16.7	0.0	0.0	16.4	0.0	0.0	18.1	6.2	6.2	19 2	7.1	71
Incr Delay (d2); s/veh	0.6	0.0	0.0	0.4	0.0	0.0	8.3	0.8	0.8	112	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ie BackOfQ(50%),vetsfin	0.7	0.0	8.0	0.5	0.0	0.0	11	1.5	1.5	0.4	14	1.4
Unsig Movement Delay shieh	9+67	0.0	0.0	u.J	0.0	0.0	10.1	1.0	7.0	0.4	1.7	1.5
LnGm Delay(d),s/veh	17.3	0.0	0.0	16.8	0.0	0.0	26.5	7.0	8.9	30.4	7.9	7.9
LnGrp LOS	8	A	A	В	A	A	C	A	A	C	A	A
Approach Vol. velvh	D	86		D	80			965			741	
Approach Delay, siven		17.3	441.00		16 8			900			87	
Approach LOS	-	17.3 B	-	-	8	-	_	A	-		A .	
A ROS FEMALES		107.04		11-					193000		М	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	25 6		8.8	7.5	23.8	100	8.8	30400	Mary (W)		ш
Change Period (Y+Rc), s	4.5	5.0		4.5	45	50		45				
Max Green Setting (Gmax), s	24.0	44.0		29.0	24.0	44.0	I MAY	29.0		/455		
Max Q Clear Time (q_c+i1) s	26	8 1		40	42	73		32				
Oreen Est Time (p_c), s	0.0	12.5		0.6	0.2	9.9	-	0.4			NOVE	
Intersection Summary	0.1		5115	- W		200	JUI 5	0.10		111		
HCM 6th Ctrl Delay	Siles	200	9.5		THE RES	1	THE PARTY	September 1		91		
HCM 6th LOS			A									

Traffic Operations Study for the Mickintegralle Town Center Project W-Trans

PM Existing Page 8

HCM 6th AWSC

2 Central Ave & Murray Rd

interpeation.		-12		4	Same?	- 45				-		100		200	
Intersection Dalay sive	h16.4														
Intersection LOS	¢			15.10			KI.	500		197	anti-		100	5 32	100
Movement	EBL	EBT	EBR	WEL	WBT	WER	NBL	NBT	MOR	SBL	SBI	SBR			
Lane Configurations	7	*	1	3	To		-	4		7	4	7			
Traffic Vol., velvh-	87	33	144	45	96	16	161	174	34	9	254	123			
Future Vol. veh/h	87	33	144	45	96	15	161	174	34	9	254	123			
Peak Hour Factor	0 89	0.89	0.89	0.89	9.89	0.89	0.80	0.89	0.89	0.89	0.89	0.89			
Heavy Vehicles, %	2	- 2	2	2	2	2	2	2	2	2	2	2			
Murrit Frow	98.	37	162	51	108	18	181	196	38	10	265	138			
Number of Lanes	t	1	1	4	1	0	1	1	0	1	1	1			
Approach	13	O'CL	1100	WB	570		NB	71		SB				7540	100
Opposing Approach	WB			IB			SB			NB					
Opposing Lanes	2			3			3			2					SEC.
Conflicting Approach Le	# SB			NB			EB			W8					
Conflicting Lanes Lett	3			2			3			2			200		
Conflicting Approach Ri	ghN8			58			WB			EB					
Conflicting Lanes Right	2			3			2			Э		THE ST	THE REAL PROPERTY.		
HCM Control Delay	137			14.1			17			18.5			-		
HCM LOS	B		Total No.	A		100	C			C	TOTAL		3100	ALC: UNKNOWN	10000

State	NELDI	NBL/12	EBLIN	EBLA2	EBLINB	Weller	VEL n2	88Lm1	98in2	SELDE	
Vol Left, %	100%	0%	100%	9%	0%	100%	0%	100%	0%	0%	
Vol Thru, %	0%	84%	0%	100%	0%	0%	86%	0%	100%	0%	The state of the s
Vol Right, %	0%	16%	0%	0%	100%	0%	14%	0%	0%	100%	
Sign Control	Stop	Stop	Stop	Slop	Slop	Stop	Slop	Step	Stop	Stop	A STATE OF THE REAL PROPERTY.
Traffic Vol by Lane	161	208	87	33	144	45	112	9	254	123	
LT Val	161	D	87	0	0	45	0	9	0	0	And the second
Through Vol	0	174	0	33	0	0	96	0	254	0	
RT Vol	0	34	0	0	144	0	16	0	0	123	O'THE PLANE
Lane Flow Rate	181	234	98	37	162	51	126	10	285	138	
Geometry Grp	6	8	6	В	6	9	6	f	6	6	and the second second
Degree of Util (X)	0.409	0.488	0.235	0.084	0.334	0 125	0.291	0 023	0 609	0.267	
Departure Headway (Hd)	8.147	7 523	8.85	8.14	7 424	8.932	8.319	8.186	7.677	6.864	
Convergence, Y/N	Yes	Yes	Yes	Ves	Yes	Yes	Yes	Yes	Yes	Yes	
Свр	441	477	413	439	482	400	430	438	468	514	THE RESERVE TO SERVE THE PARTY OF THE PARTY
Service Time	5.921	5.297	6.43	5 9 1 9	5.203	6717	6.103	5 958	5 448	4 734	
HCM Lane V/C Ratio	0.41	0.491	0.237	0.084	0.336	0.128	0.293	0.023	0.609	0.288	TABLE THE STATE
HCM Control Delay	16 5	173	14 1	11.7	139	13	14 5	112	21.8	123	
ICM Lane LOS	C	C	В	8	8	В	В	B	C	В	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN
HCM 95th-tile Q	2	28	0.9	0.3	1.5	0.4	1.2	0.1	4	11	

Traffic Operations Study for the Mickinleyville Town Center Project W.Trans

AM Future No Project 2045 Page 1

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Future No Proyect 2045 Plage 2

Intersection			-		500				8	- 0	9008	- 100	3992		
Int Delay s/veh	3					-									
Movement	EBL	EBT	EBR	WEL	WBT	WER	NBL	NBT	NBR	SOL	SBT	SBR			
Lane Configurations		at.			- A	1		***			+\$+				
Traffic Vol. veh/h	8	4	- 8	29	8	37	3	155	32	42	194	2			
Future Vol. yeh/h	6	- 4	H	29	8		- 3	155	32	42	194	2			
Conficting Pade, Mar.	- 9	0	2	111	.0		2	0	1	8	0	9			
Sam Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free			
RT Channelized		-	None	THE R	THE P	None		-	None	-		Name	400		
Storage Length			11000000		-	-			- and a local	1.0		To be a second			
Veh in Median Storage		0		100	0			0	-	112	0	1 100	S	32	EEL
Grade %	-	0			0		-	0		-	0				
Penk Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85	1		
Heavy Vehicles, %	2	2	- 2	2	2	2	2	2	2	2	2	2			
Mornt Flow	9	5	9	34	9	44	-4	182	38	49	228	2	-21-20	SALL!	
Major/Minor 1	linor2		3	Minori		- 6	Magoc			dujor2		172		dia.	25
Conflicting Flow Alt	581	572	240	553	554	218	238	0	0	228	0	Ð			
Stage 1	336	338	me	217	217	citio	manings;	14		-770	5				
Stage 2	245	236		336	337						-				
Critical Hdwy	7.12	6.52	6 22	7 12	6.52	6.22	4.12	STA		4.12		1			
Critical Howy 5m 1	5 12	5 52		6 12	5 5 2				-			1			
Critical Howy Stg 2	6.12	5.52	-	6.12	5.52		22 .	THE	LIG.			THE ST	ERSH	4.0	213
	3 5 1 8	4 0 18	3 318	3 518	4 018	3 318	2.218		-	2:218		5			
Pot Cap-1 Maneuver	475	430	799	444	440	822	1328	100	ENE	1340	W.	TI BAFE	NEO.		
Stage 1	6/B	642	-	785	723		1			-		1			
Stage 2	750	710		678	641		S-115	- FF	112	- 3	124	OT A		= 100	
Platoon blocked. %	-12.50							-				-			
Mov Cap-1 Manegver	375	404	791	416	413	869	1317	-	1	1330	160	1500	ELSN	-	===
Mov Cap-2 Maneuver	375	404	-	416	413	-	THE PERSON NAMED IN	-	-	-		-			
Stage 1	670	609	100	776	715	1		- 1		-74	70	17.45	-		ST61
Stage 2	701	702	-	636	608			14	-			-			
The state of the s	- agent	150		3011		115							4		
Approach	EB	-37		IAB			NB		-81	58					310
HCM Control Delay, s	12.8		-1145	12.8	-	100	0.1		W.	14	1	- 110	-		
HCM LOS	В			В		-	-			100	-				
				100	628					150	Wells			Lak	
Minor Lane/Major Mvm		NBL	NBT	NBR	EBLntk	VBLm1	SBL	SBT	SBR		9,5	100			
Capacity (veh/h)	100	1317	200		484	549	1330		0.5				120		
HCM Lane V/C Ratio		0.003			0.049	0 159	0 037	141							
HCM Centrol Delay (s)	1	7.7	- 0		12.6	12.8	7.8	0	100		200			BE	
HCM Lane LOS		A	A		- 15	8	A	А							
HCM 95th %Sie D(veh)		0	mar.	_	0.2	0.5	0.1			_		-		_	-12

HCM	6th	Sigi	nalized	Intersection Summary

4	Central	Ave	&	Railroad	Dr

06/21/2024

	1	-	*	1	-	1	1	1	-	1	1	1
Movement	SBL	EBT	EBR	WEL	WBT	WBR	NBL	NBI	NBR-	SEL	SBT	Son
Lane Configurations	7	10			190		7	**		*	Fo	
Traffic Volume (vishih)	18	46	46	85	26	50	28	328	67	101	379	16
Future Volume (veh/h)	18	46	46	85	26	50	28	328	67	101	379	16
Initial Q (Qb), vieh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0 98		0.96	0 98		0 97	1 00		0 95	1 00		0.97
Parking Bus, Adj	1.00	1 00	1.00	100	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	54	2	100	31	38	33	386	53	119	446	17
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, velvh	534	445	16	319	102	83	54	1043	142	159	703	27
Arrive On Green	0.25	0 25	0.25	0.25	0.25	0.25	0.03	0 33	0 33	0 09	0.39	0.39
Sal Flow, veh/h	1306	1789	66	744	408	334	1781	3121	425	1781	1787	6.0
Grp Volume(v), veh/h	21	0	56	169	0	0	33	218	221	119	0	463
Grp Sat Flow(s), vetralia	1308	0	1855	1486	0	0	1781	1777	1789	1781	0	1856
Q Serve(q_s), s	0.0	0.0	1.0	2.5	0.0	0.0	0.8	40	41	2.8	0.0	86
Cycle Q Clear(q_c), s	0.4	0.0	1.0	3.9	0.0	0.0	0.8	4.0	4.1	2.8	0.0	8.6
Prop In Lane	1 00		0.04	0.59		0.22	1 00		D 24	1 00		0.04
Lane Grp Cap(c), velvh	534	0	462	504	0	0	54	594	591	159	0	730
V/C Ratio(X)	0.04	0 00	0 12	0 34	0.00	0 00	061	0 37	0 37	0.75	0.00	0 63
Avail Cap(c a), yeh/h	1308	0	1562	1359	0	0	1000	2078	2069	1000	0	2170
HCM Plaloon Ratio	1 00	1 00	1.00	1 00	1.00	1.00	1 00	1 00	1.00	1 00	1 00	1.00
Upstream Filler(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	12.4	134	0.0	0.0	20 5	10.8	10.8	190	0.0	10 5
Incr Delay (d2), s/veh	0.0	0.0	0.0	01	0.0	0.8	10.6	0.7	0.7	6.8	0.0	1.6
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackO(Q(50%),veh/ln	0.1	0.0	0.4	1.2	0.0	0.0	04	13	1.3	1.3	0.0	2.9
Unsig Movement Delay s/veh						A Prince			-			_
LnGrp Delay(d),s/veh	12.2	0.0	12.5	13.6	0.0	0.0	31.1	11.5	11.5	25.8	0.0	12.1
LnGrp LOS	В	_ A	В	В	A	Α	C	В	B	Ç	A	В
Approach Vol. veh/h	CO.	77	5810000	1111	169	VIII	7155	472	No.		582	7
Approach Delay s/veh		12.4	-		13.6	1,000		12.8	-		149	
Approach LOS	158	8	-	1	8	100		В	100	and the	В	
Timer - Assigned Phs	1	2	12.00	4	5	6	111	8		60 T		
Phs Duration (G+Y+Rct s	8.3	13.3		15.6	5.8	21.3	100	15.6				
Change Period (Y+Rc), s	45	45		50	45	45		50				
Max Green Setting (Gmax), s		50.0	100	36.0	24.0	50.0	-	36.0	LIBS	1000	-	
Max Q Clear Time (g_c+l1) II	48	6 1		30	2.8	10 6		5.9				
Green Ext Time (p_c), s	0.3	49		0.2	0.0	5.5		0.7	FIE	ALM F	1.77	15
Intersection Surrouty		200	4.0			- 00			W. T			10
HCM 6th Ctr! Delay		BUH	13.8	20.00	100	SECTION 1	1	Transition in		1550		
HCM 6th LOS			В									

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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Traffic Operations Study for the MicKinlasywille Town Center Project W-Trans

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HCM 6th AWSC 5 McKinleyville Ave & Hiller Rd

08/21/2024

Intersection Delay, s/ve	h111															
Intersection LOS	8			115		-	100		807			15/21		35		
Movement	EBL	EBT	EBR	WEL	WBT	WER	NBL	NBT	NBR	SBL	SBT	SBR		В	2	
Lane Configurations	7	*	- 7		4	r		4			4					
Traffic Vol, velvh	39	29	58	26	30	35	30	126	36	00	163	18				
Future Vot. veh/h	39	29	58		30	35	30	126	38	60	163	16				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85				
Heavy Vehicles, %	2	2	2	2	2	- 7	2	2	2	2	2	2				
Mornt Flow	46	34	68	31	35	41	35	148	42	71	192	19				
Number of Lanes	1	t	1	1	1	13	0	1	0	0	1	0				
Approach	EB			WB		_14/6	N9	8 L	", W	SB	-			-	3 14	00
Opposing Approach	WB			EB			SB			NB						
Opposing Lanes	3			3	944		1			- 1						
Conflicting Approach Le	aft SB			NB			EB			WB						
Conflicting Lanes Left	1			1		MSE	3			3		1000				
Conflicting Approach Ri				SB			WB			EB						
Conflicting Lanes Right	1			1	ANTO					3						
HCM Control Delay	9.3			9.2			11.2			126						
HCM Control Delay HCM LOS			0 :	9.2 A		-	11.2	(a)	anile a	12.6 B	et to a		280	2/3	1700	
HCM Control Delay	9.3		9 :		200	-70		No.	W.		and	- 6	200	2/3	100	
HCM Control Delay HCM LOS	9.3 A	Burt	ment	А	EBUATA	With	8	MHL:ri3	\$60 m1					itoli	SIII	
HCM Control Delay HCM LOS	9.3 A			А		WILD!	8	NHLTG 0%	SBL m1 25%		anit . M			evil	100 201	
HCM Control Delay HCM LOS Lane Vol Leff, %	9.3 A		100%	A PSUIZ		100%	8 481 n2									
HCM Control Delay HCM LOS Lane Vol Left, % Vol Thru, %	9.3 A	16%	100%	PRUNZ 0%	0%	100%	0% 100%	0%	25%							
HCM Control Delay HCM LOS Lane Jol Left, % Jol Thru, % Jol Right, %	9.3 A	16% 66% 19%	100%	A PRUM2 0% 100%	0% 0%	100% 0%	0% 100%	0% 0%	25% 88%					W)		
HCM Control Delay HCM LOS Lane Vol Left, % Vol Thru, % Vol Right, % Sign Control	9.3 A	16% 66%	100% 0% 0%	0% 100%	0% 0% 100%	100% 0% 0%	0% 100% 0%	0% 0% 100%	25% 88% 7%					100 100 100 100 100 100 100 100 100 100	30 30 20 20	
HCM Control Delay HCM LOS Lane Vol Left, % Vol Thru, % Vol Right, % Sign Control Traffic Vol by Lane	9.3 A	16% 66% 19% Stop 192	100% 0% 0% Stop 39	0% 100% 9% Stop 29	0% 0% 100% Slop	100% 0% 0% Stop	0% 100% 0% Stop 30	0% 0% 100% Stop	25% 88% 7% Stop					evil	211	
HCM Control Delay HCM LOS Laire Vol Left, % Vol Thru, % Vol Right, % Bign Control Traffic Vol by Lane LT Vol	9.3 A	16% 66% 19% Stop	100% 0% 0% Stop	0% 100% 9% Step	0% 0% 100% Slop 58	100% 0% 0% Stop 26	0% 100% 0% Stop	0% 0% 100% Stop 35	25% 58% 7% Stop 239							
HCM Control Delay HCM LOS Lane Vol Left, % Vol Tru, % Vot Right, % Bign Control Traffic Vot by Lane LT. Vol Through Vol	9.3 A	16% 66% 19% Stop 192 30 126	100% 0% 0% Stop 39	0% 100% 5top 29	0% 0% 100% Slop 58	100% 0% 0% Stop 26	0% 100% 0% Stop 30	0% 0% 100% Stop 35	25% 68% 7% Slop 239 60							
HCM Control Delay HCM LOS Lane Yol Left, % Yol Tru, % Yol Right, % Sign Control Irallic Vol by Lane T. Vol Through Vol XT.Vol	9.3 A	16% 66% 19% Stop 192 30	100% 0% 0% Stop 39 39	A 250m2 0% 100% Step 29 0 29	0% 0% 100% Slop 58 0	100% 0% 0% Stop 26 26	0% 100% 0% Stop 30 0	0% 0% 100% Stop 35 0	25% 68% 7% Stop 239 60 163	В						
HCM Control Delay HCM LOS Lane Vol Left, % Vol Thru, % Vol Right, % Sign Control Traffic Vol by Lane I. Vol Through Vol 37. Vol ane Flow Rate	9.3 A	16% 66% 19% Stop 192 30 126 36 228	100% 0% 0% Stop 39 39 0	0% 100% 0% Stop 29 0 29 0	0% 0% 100% Skop 58 0 0 58 68	100% 0% 0% Stop 26 26 0 0	0% 100% 0% Stop 30 0 30 0 35	0% 0% 100% Stop 35 0 35 41	25% 68% 7% Slop 239 60 163 16	В						
HCM Control Delay HCM LOS Lane vol Left, % vol Right, % Sign Control fraffic vol by Lane I.T vol Through Vol RT.Vol ane Flow Rate Jaconistry, Opp.	93 A	16% 66% 19% Stop 192 30 126 36 228 5	100% 0% 0% Stop 39 0 0 46	0% 100% 0% Step 0 29 0 34	0% 0% 100% Sipp 58 0 0 58 68	100% 0% 0% Stop 26 25 0 0 31	0% 100% 0% Stop 30 0 30 0 35	0% 0% 100% Stop 35 0 0 35 41	25% 88% 7% Slop 239 60 163 16 281	В				evil evil		
HCM Control Delay HCM LOS Zane Jol Left, % Jol Left, % Jol Rugh, % Jol Riggh, % Jol Riggh, % Jol Riggh, % Jol Riggh, % Jon Riggh, W Jone Town Rate Joecniety, Gip Joegner of Usi (X)	93 A	16% 66% 19% Stop 192 30 126 36 228	100% 0% 0% Stop 39 0 0 46 5	A 100% 100% 5top 29 0 34 5 0.059	0% 0% 100% Stop 58 0 58 68 68	100% 0% 0% Stop 26 26 0 0 31 5	0% 100% 0% Stop 30 0 30 0 35 5	0% 0% 100% Stop 35 0 0 35 41	25% 58% 7% Stop 239 60 163 16 281 5	В						
HCM Control Delay HCM LOS Joil Left, % Joil Left, % Joil Left, % Joil Rept, % Join Rept, % Join Control Fallic Vot by Lane T You T You T You T You Join Control T You Join Control T You Join Control T You Join Control Join Join Control Join Join Join Join Join Join Join Join	93 A	16% 66% 19% Slop 192 30 126 36 226 5 349 5559	100% 0% 0% Stop 39 0 0 46 5	0% 100% 0% Step 0 29 0 34	0% 0% 100% Sipp 58 0 58 68 5 0 104 5.467	100% 0% 0% Stop 26 26 0 0 31 5 0.057 6.76	0% 100% 0% Stop 30 0 30 0 35 5	0% 0% 100% Stop 35 0 0 35 41 5 0.063 5.534	25% 58% 7% Stop 239 60 163 16 281 5	В						
HCM Control Delay HCM LOS Lane Los HCM Los HC	93 A	16% 66% 19% Stop 192 30 126 36 226 5 349 5.559 Yes	100% 0% 0% Step 39 0 0 46 5 0.085 8.692 Yes	0% 100% 0% 5top 29 0 29 0 34 5 0.059 8 182	0% 0% 100% Stop 58 0 58 68 68	100% 0% 0% Stop 26 26 0 0 31 5	0% 100% 0% Stop 30 0 35 5 0.061 5.249	0% 0% 100% Stop 35 0 35 41 5 0.063	25% 58% 7% Sixp 239 60 163 16 281 5 0 439 5.617	В						
HCM Control Delay HCM LOS Jane Jol Left, % Jol Tiru,	9.3 A	16% 66% 19% Stop 192 30 126 36 226 5 349 5559 Yes 651	100% 0% 0% Stop 39 0 46 5 0.085 6.692 Ves	0% 100% 0% Stop 29 0 29 0 34 5 0.059 6.182 Yes 580	0% 0% 100% Stop 58 0 58 68 5 0 104 5.467 Yes 655	100% 0% Stop 26 26 0 0 31 5 0.057 6.76 Yes 530	0% 100% 0% Stop 30 0 35 5 0.061 5.249 Yes 573	0% 0% 100% Stop 35 0 0 35 41 5 0.063 5.534 Yes 647	25% 68% 7% Slop 239 60 163 16 281 5 0 439 5.617 Yes 644	В						
HCM Control Delay HCM LOS Vol Left, % Vol Turu, % Vol Turu, % Vol Turu, % Vol Turu, %	9.3 A	16% 66% 19% Slop 192 30 126 36 228 5 349 5559 Yes 651 3267	100% 0% 0% Stop 39 0 46 5 0.085 6.692 Ves 536 4.426	A PSUIT? 0% 100% 0% Stop 29 0 29 0 34 5 0.059 6.182 Yes 580 3.915	0% 0% 100% Stop 58 0 58 68 5 0 104 5467 Yes 654 3 2	100% 0% Stop 26 26 0 31 5 0 057 6.76 Yes 530 4 497	9 0% 100% 0% Stop 30 0 35 5 0.061 5.249 Yes 573 3 986	0% 0% 100% Stop 35 0 35 41 5 0.063 5.534 Yes 647 3.271	25% 68% 7% Sibp 239 60 163 16 281 5 0 439 5.617 Yes 644 3 323	В						
HCM Control Delay HCM LOS Lane Vol 1 Et 1, % Vol 1 Et 1,	9.3 A	16% 66% 19% Stop 192 30 126 36 226 5 1 349 9 5 559 Yes 651 3 267	100% 0% 0% Stop 39 0 0 46 5 0 085 8.692 Ves 536 4 426 0.086	A PFUN 0% 100% 0% Stopp 0 0 29 0 34 5 0 059 8 182 Yes 580 3 915 0 069	0% 0% 100% Slop 58 0 58 68 5 0 104 5.467 Yes 659 3.2 0.104	100% 0% 0% Stop 26 26 0 31 5 0 057 6.76 Ves 530 4 497 0.058	8 100% 0% 0% Stop 0 0 30 0 35 5 0.061 5.249 Yes 573 3 986 0.061	0% 0% 100% Stop 35 0 35 41 5 0.063 5.534 Yes 647 3.271 0.063	25% 68% 7% Sibp 239 60 163 16 281 5 0 439 5.617 Yes 644 3 323 0 436	В						
HCM Control Delay HCM LOS Lane Vol Leff, %	9.3 A	16% 66% 19% Slop 192 30 126 36 228 5 349 5559 Yes 651 3267	100% 0% 0% Stop 39 0 46 5 0.085 6.692 Ves 536 4.426	A PSUIT? 0% 100% 0% Stop 29 0 29 0 34 5 0.059 6.182 Yes 580 3.915	0% 0% 100% Stop 58 0 58 68 5 0 104 5467 Yes 654 3 2	100% 0% Stop 26 26 0 31 5 0 057 6.76 Yes 530 4 497	9 0% 100% 0% Stop 30 0 35 5 0.061 5.249 Yes 573 3 986	0% 0% 100% Stop 35 0 35 41 5 0.063 5.534 Yes 647 3.271	25% 68% 7% Sibp 239 60 163 16 281 5 0 439 5.617 Yes 644 3 323	В						

HCM 6th Signalized Intersection Summary 6 Central Ave & Hiller Rd

08/21/2024

	*	+	1	1	+	1	1	†	1	1	Į.	1
Movement	EBL	EST	EER	WEL	WBT	WBR	NBL	NOT	NBR	SBL	SBT	SBR
Lane Configurations	7	ţ,			4		74	41.		H	+1.	
Traffic Volume (veh/h)	26	1	72	2		- 0	54	449	3		530	21
Future Volume (vels/h)	26	- 1	72	2	1	0	54	449	3	- 3	530	21
Initial Q (Qb), veh	- 0	0	10	0	- 0	0	0	0	0	0	0	0
Ped-Bike Adj(A pbT)	0.98	-	0 99	0.98		1.00	1.00		1 00	1.00	7.444	0.98
Parking Bus, Adl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1.00
Work Zone On Approac	h	No	-	A I I A I A	No			No		10014	No	
Adi Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adi Flow Rate, veh/h	28	1	3	2	1	0	59	488	2	- 3	576	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh. %	- 2	2	2	- 2	- 2	2	2	- 2	2	2	2	2
Cap, yelvh	317	21	63	253	25	0	93	1707	1	- 6	1479	49
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.00	0.05	0.47	0 47	0.00	0.42	0.42
	1393	410	1230	967	483	0	1781	3830	15	1781	3508	116
Crp Volume(v), volum	26	0	4	3	0	0	59	239	251	3	291	304
Grp Sat Flow(s) veh/h/h		0	1639	1450	0	0	1781	1777	1868	1781	1777	1847
O Serveig II), s	0.4	0.0	0.1	0.1	0.0	0.0	1.0	2.4	24	0.0	33	3.4
Cycle O Clearlo ct. s	0.5	0.0	0.1	0.1	0.0	0.0	1.0	2.4	2.4	0.0	33	34
Frop In Lane	1 00	0.0	0.75	0.67	419)	0.00	1 00	1000	0.01	100	2.0	0.06
Lane Grp Cap(c), veh/h		0	84	278	0	0	93	836	870	6	749	779
V/C Rabo(X)	0.09	0.00	0.05	0.01	0.00	0.00	U 64	0.29	0.29	0.50	0.39	0 39
Avail Cap(c. a), Veh/h	1852	0	1891	1952	. 0	. 0	1752	3013		1752	3013	3132
HCM Platoon Ratio	1.00	1 00	1.00	1.00	1 00	100	1.00	1 00	1.00	1.00	1 00	1.00
Upstream Filter(I)	100	0.00	1.00	1.00	0.00	0.00	1.00	1.00	100	1 00	1.00	1.00
Uniform Delay (d), s/vel		0.0	13.3	13.4	0.0	0.0	13.7	4.8	48	14.7	5.9	5.9
Incr Delay (d2), siveh	0.2	0.0	0.3	0.0	0.0	0.0	2.7	0.3	0.3	21.5	0.6	0.5
initial Q Delay(d3) siveh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yalir BackOfO/50%) ver		0.0	0.0	0.0	0.0	0.0	Q.A	0.4	0.4	0.1	0.0	0.7
Ursay, Movement Delay			4.4	M.M.	4.6	44	14.0	19,00	1.4/2	WA'O	0.1	0,1
	13.7	0.0	13.6	13.4	0.0	0.0	16.4	5.1	5.1	36.2	6.5	8.4
LnGro LOS	В	A	13.0	8	A	A	В	A	A	D	Α.	A
Acoroach Vol. veh/h	ь	- 32	-	- 0	3	- "	D.	540	- 14	'n	598	- 4
Approach Vol. Verviii Approach Delay, s/veh	1000	13.7	100	OBSC D	134	-03	2000	6.1	200		66	
Approach LOS		13.7	1	-	13.4 B	-	-	A	11110		6 6 A	
	10.0	D.		-	-			- 00				
Timer - Assigned Phs	4	- 2			- 5	- 4		ð.				
Phs Duration (G+Y+Rc)		18.4	48.3	6,5	6.0	16.9	200	8.5	1-23	140	-15	
Change Period (Y+Rc),		45		5.0	45	45		5.0				
Max Green Setting (Gm		50.0	William.	34.0	29.0	50.0	= 0.00	34.0	18	ALC:	util E	
Max Q Clear Time (g. c.		44		25	3.0	5.4		21				
Green Ext Time (p_c). s	0.0	5.5	A SE	0.1	01	70		0.0		-	-	13.
Illimechon Summary	10	la a			4		10	/= 1			CATTE:	SIIS
ICM 6th Cfrl Delay	ALC:		6.7	6H2				550	SCO.		100	85
HCM 6th LOS			A				-					

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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HCM 6th TWSC 7 McKinleyville Ave & Hayes Rd/Heartwood Dr

φ	12	1	12	2

Intersection							8	1128	- 60	-1		100		Y
Int Delay, s/veh	36								-					
Movement	HBL.	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	TIL SE	100
Lane Configurations		4.			44			+1-			***			
Traffic Vol, veh/h	. 8	6	8	29	2	51	6	121	14	84	187	7	100	
Future Vol. veh/h	8	F.	B	29	2	51	6	121	14	64	187	7		
Conficting Peds, #hr	C	- 0	0	3	0	4	10	0	- 3	151	0	0		STATE OF THE PERSON
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	-02	-	None	-		None			None	1	E.C.	None	10 S.J.	
Storage Length						,			dishort	12		4		
Veh in Median Storage	# .	0			0		1	0	THE O	100	0		الموضيا	and a
Grade, %		0			0			0		101	0	-		-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85	3 10	1000
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		-
Mymt Flow	9	7	9	34	2	60	1	142		75	220	8	Sec. 18	-
		-					-		THE PARTY NAMED IN					
Major/Minor A	linor2		- 32	Minera			Majort			tast?	-			
Conflicting Flow All	572	549	227	552	545	156	228	D	0	161	0	0		
Stage 1	374	374	221	167	167	130	220		-		U	0		-
Stage 2	198	175		385	378			-	-	190				
Critical Howy	7 12	6.52	6.22	7.12	6.52	6 22	4.12			4.12	100	_	TO PROCE	1
Critical Howy Stg 1	6 12	5.52	0.22	6 12	5 52	0.22	4.12	-		4.12		The same	-	
Critical Howy Stg 7		5.52	uterian	6 12	5.52	1	-	THE PERSON	5000	TR.		2125		The same of the sa
	3518	4.018	3 318	3 518	4.018	3 318	2 2 1 8	11.11.5	-	2 218		-	_	
Pot Cap-1 Maneuver	431	443	812	444	446	890	1340	-	11 25		STORY.	A 125	CA COLOR	SEC. III
Stage 1	647	618	012	835	780	090	1340	100		1910	ALL LA	LV-F	4500	
Stage 2	804	754	3 24	63B	615	-	-	THE CO	-	102	meuin	-	-	VIII T
Platoon blocked. %	009	100	-	OJD	-610	-	A SOL	BELL!		12	10/2	and the	MARKET	
	378	412	810	409	415	885	1340	-	-	var.	-	-	_	
Mov Cap-1 Maneuver	378	412	910	409	415	B40	Upity:		100	1414	i Ot	-		-
Mov Cap-2 Maneuver Stage 1	843	580	BOALS.	827	753	-	-		-			-	-	-
Stage 2	741	747	Almil A	583	577		-	-			200	(+	3- 6-	
awyd 2	741	14/		202	3//			-	esi.	THE REAL PROPERTY.			700	
Appriorach -	EB			WB			NB		-	SB			1000	-
HCM Control Delay, s				11.9			0.3	The said		1.9				to laula
HCM LOS	B	-	-	B			4.0			CH				
TIGW LOG	D	TON			VIIII		70		Tiel!	THE			U STORY	W.10
Minor Lune/Mayor Afum	11	NBL	SBT	NEWS	EBENIN	VESINE	193	BAT	SER	5.70	-			No.
Capacity (veh/h)		1340			487	615	1414		-	1900	100	1	A London	-
HCM Lane V/C Rate	-	0.005		-	0.054	0 157	0 053	-		-	-	-		
HCM Control Detay (s)		7.7	0	-	12.9	119	7.7	ā	77.797	550		1	-	
HCM Lane LOS		A	A		8	B	Α	A	ment.	-			-	-
HCM 95th %tile Q(veh)		0		_	0.2	0.5	0.2	11	_	-		-	-	arracoies.

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	1	-	1	1	-	1	4	†	-	1	+	1
Mavement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NET	NBR	6BL	SBT	805
Lane Configurations		- dia			eja		*	本作		7	**	
Traffic Volume (Veh/h)	42	18	92	61	13	24	75	466	38	21	524	38
Future Volume (veh/h)	42	18	92	61	13	24	75	466	38	21	524	38
Initial Q (Qb), yet	0	D	0	0	0	0	0	0	0	0	0	. (
Ped-Bike Adj(A_pbT)	1 00		0 99	1 00		1 00	1 00		0.97	1.00		0.98
Parking Bus, Adi	1.00	1.00	1.00	1.00	100	1 00	1 00	1.00	1.00	100	1.00	1.00
Work Zone On Approach		No			No		-	No			No	
Adi Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adi Flow Rate, veh/h	44	19	4	64	14	9	78	485	32	22	546	33
Peak Hour Factor	0.96	0.96	0.96	0.98	0 96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap velvh	288	45	10	304	25	16	111	1531	101	39	1405	85
Airne On Green	0 10	0 10	0 10	0.10	0 10	0 10	0.06	0.45	0 45	0 02	0.41	041
Sat Flow, vehin	1090	471	99	1169	256	164	1781	3378	222	1781	3400	205
Grp Volume/vi. veh/h	67	0	0	87	0	0	78	254	263	22	285	294
Grp Sat Flow(u) verythin	1661	0	0	1589	0	0	1781	1777	1824	1781	1777	1828
C Serve(g. s); s	0.0	0.0	0.0	0.4	00	0.0	14	30	3.0	0.4	37	37
Cycle Q Cleav(g c), s	1.1	0.0	0.0	1.6	0.0	0.0	1.4	3.0	3.0	0.4	37	3.7
Prop in Lane	0.66	0.0	0.06	0.74	0.0	0.10	1.00	3.0	0.12	1 00	0/	0 11
Lane Grp Cap(c), veh/h	343	0	000	344	0	0 10	111	805	826	39	734	755
V/C Rate(X)	0 20	0 00	0.00	0.25	0.00	0 00	0.71	0.32	0.32	0.56	0 39	0 39
Avail Cap(c_a), vah/h	1535	0 00	000	1505	0 00	0 00	1308	2391	2454	1308	2391	2460
HCM Plateen Ratio	1.00	1.00	100	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00
	1.00		0 00	1.00	0.00	0.00	1.00	1.00	1.00	1 00	1.00	100
Upsteam Filter(II		0.00										
Uniform Delay (d), s/veh	139	0.0	0.0	14 0	0.0	0.0	150	57 0.5	57	158	6.7 0.7	67
Incr Delay (d2), s/veh	0.4	0.0			0.0				0.5			0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sale BackOfQ(50%) vet/fn	0.4	0.0	0.0	0.6	0.0	0.0	0.7	0.7	07	0.3	0.9	9.0
Unsig Movement Delay, s/var			-	-						-	-	-
Linding Distay(d), sAleh	14.2	0.0	0.0	14.6	0.0	0.0	23.0	6.2	6.2	27.5	7.4	7.4
LnGrp LOS	В	A	Α	В	A	A	C	A	A	C	A	A
Approach Vol, velvh		67			87		15	595			601	
Approach Delay, siveh		14.2			14.6			84			8.2	
Approach COS		В	6		В			A			A	
Trner - Assigned Pits	1	2		4	5	6		8	70	24.	100	-
Pris Duration (G+Y+Rc), a	5.2	19.8		7.7	8.5	18.5		7.7				
Change Period (Y+Rc), s	45	50		45	45	5.0		45				
Max Green Setting (Gmax), s	24.0	44.0		29.0	24.0	44.0		29.0				
Max Q Clear Time (g_c+l1) s	2.4	50		31	34	57		36				
Green Ext Time (p_c), s	0.0	6.7	E	0.4	0.2	7.7	2170	0.6	WA.		- 74	. 1
ntersection Summary				100				100	7103	La I		
HCM 8th Ctrl Delev	100	ALC: N	9.0	C 8 10	THE R	APR ST	mis	-	1	THE REAL PROPERTY.	No.	TORU
1001.00.100			- AT. N									

Traffic Operations Study for the MicXinleyville Town Center Project W-Trans

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Intersection		20015	1011	and the second								
Intersection Delay, s/veh	11.8				_							
Intersection LOS	В	2010	2,310	SE TEN	200	1-11	10			SH-S	7-5-11	E E
Movement.	EBL	EBT	EBR	WEL	WET	WER	NBC	NST	NBR	V58L	SBT	168
Lane Configurations	*	10		*	朴九			4			4	
Traffic Vol. veh/h	95	295	188	42	193	18	103	37	43	8	33	2
Future Vol., veh/h	95	295	188	42	193	18	103	37	43	8	33	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.9
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	:
Mymt Flow	101	314	200	45	205	19	110	39	46	9	35	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	(
Approach	EB			WB			NB	بلايت	NEW Y	SB	RES	
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3						14		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			3			130		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1	Marie S		1			3			3		
HCM Control Delay	12			10.5			135			10.6		
HCM LOS	В	lumb.	-275.0	В		STATE OF	В		Sally	В		22.0
ane		NBin!	EBlad	EBitn2			WBEn2	WBlen3	SBEnt			
Voi Left, %		56%	100%	0%	0%	100%	0%	0%	12%			
/ol Thru, %	Les la	20%	0%	100%	34%	0%	100%	78%	52%	100		4
Vol Right, %		23%	0%	0%	66%	0%	0%	22%	36%			
Sign Control		Stop	Slop	Stop	Slop	Stop	Stop	Stop	Stop	فتلدوه		201
Traffic Vol by Lane		183	95	197	286	42	129	82	64			
TVol		103	95	0	0	42	0	0	8	100	فالتبار	
Through Vol		37	0	197	98	0	129	64	33			
RT Vol	ALC: HE	43	0	0	188	0	0	18	23	1000	100	STD4
ane Flow Rate		195	101	209	305	45	137	88	68	-		
Geometry Grp		- 8	5	5	- 5	5	5	5	5		700	300
Degree of Util (X)		0.369	D 179	0.341	0 457	0 084	0 239	0 149	0 129		-	
Departure Headway (Hd)		6.817	6.38	5.872	5.405	857.8	9 276	8.121	5.819		3216	
Convergence Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			_
Сар	-11	526	562	611	664	527	571	584	524	-	I SA	2
Service Time		4 569	4 125	3.617	3 15	4.541	4 031	3.875	4.584			
ICM Lane V/C Ratio	أحياجاك	0.389	0.18	0.342	0.459	0.085	0.24	0 151	0.13		April 1	5(1)
ICM Control Delay		135	10.5	116	12.7	10.2	11	10	10.6			
ICM Lane LOS		В	В	В	24	8	В	Α.	B 0.4		7005	
ICM 95th-tile Q		17	0.6	15		03	0.9	0.5				

			_	_			-				_			
Intersection					-	-	-	1	_				Acres (
Intersection Detay, s/vel Intersection LOS	n14 7		40	9,9	PER		EMP.	<u> </u>	(Total	SI Z		70.0	1,519	
Movement	EBL	EBT	EBR	WEL	WBT	WER	NEL	Nat	NER	SAL	981	SBR	diam'r.	Name of Street
Lane Configurations	7	*	7	-	7,		*	1		,	*	A		
Traffic Vol, veh/h	82	43	187	37	26	8	154	284	64	9	184	54		
Future Vol. veh/h	82	43	167	37	26	B	154	284	64	9	184	54		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0 98	0 98	0.98	0.98	0.98		- Milwis
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mymt Flow	84	44	170	38	27	8	157	290	65	9	188	55	A C 15.00	ALTERNATION IN
Number of Lanes	1	1	1	1	1	0	1	1	0	1	1	1		
Approach	EB			WB		100	113		135	SB	34,	5 EV	Day.	1000
Opposing Approach	WB			EB			SB			NB				
Opposing Lanes	2			3			3	THE REAL PROPERTY.		2	WE STE			-
Conflicting Approach Le	R SB			NB			EB			WB				
Conflicting Lanes Left	-3			2			. 3			2	2 312		Clarent	
Conflicting Approach Rig	SMH;			SB			WB			EB				
Conflicting Lames Right	2			3			2			3		20 00	100	1 000
HCM Control Delay	12			115			17.5			13 1				
HCM LOS	B	er.		В	13115	. = 1	C			8	WIN	M. Carlo	all or	-Table
	-	PEAT	TARK	WHERESE	EBUn2	erien rates	enetural	Market Town	energy.	tomes.	SHEER		***	
Lane														- 1,16
Vol Left, %		100%		100%	0%	0%			100%	0%	0%	-		-
Vol Thru, %		0%	82%		100%	0%	0%	76%		100%				43 m
Vol Rught, %	THE ST	0%	18%	0%		100%	0%	24%	0%		100%	-	Time I or Spains	and the same of th
Sign Control	AVEAU	Stop	Stop 348	Stop 82	Stop 43	Stop 167	Stop 37	Stop 34	Stop		Stop		True C	
Traffic Vol by Lane		154	348	82	0	0	37	34	9	184	54	10,000		
Through Vol	ned	0	284	0	43	0	0	26	9	184	0		E2W7	
RT Vol	TO SAME	0	84	0	0	167	0	8	0	184	54	-	-	THE REAL PROPERTY.
ane Flow Rate	WI SHE	157	355	84	44	170	38	35	9	188	55	ELESKIII.	-	SIV
Geometry Grp	-	8	300 B	6	5	6	30 B	6	8	6	8	-	-	- DEPTH
Degree of Util (X)			0 629		0.089	0.311	0.088	0.074		0 375		THE STATE OF		ALL SHE
Departure Headway (Hd			8,488			6 564	8 356	7.68		7.195		-	-	-
Convergence, Y/N		Yes	Yes.	Yes	Yes	Vas:	Yes	Yas	Yes	Yes	Yes	1000	-	THOUSE.
Cap	-	508	561	464	496	550	430	458	486	501	554	-	to diam	CONTRACTOR OF STREET
Service Time	-		4 188		4 973	4 264	6 083			4 919		and all serves	THE PERSON	
HCM Lane V/C Ratio				0.181		0.309			0.019					or other teachers
HCM Control Delay		12.9	19.5	12.2	10 7	12.2	11.9	11	10.6	14.2	9 9		-1-20	
-ICM Lane LOS	7111	3	133	B	8	Ð	В	(g)	8	8	A		TIME TO	O SECURITY OF
-ICM 95th-6le Q		13	44	0.7	0.3	13	03	0.2	0.1	17	0.1		-	THE RESERVE

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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HCM 6th TWSC 3. McKinleyville Ave & Railroad Dr

08/21/2024

Interroction			10-											
Int Delay, s/veh	2 1													
Movement	EBL	EBT	EBR	WEL	WBT	WOR	NBL	NBT	NBR	SBL	SBT	SBR	-75	-
Lane Configurations		100		211	*	1115		44			440			
Traffic Vol, veh/h	- 2	3	4	24	12	25	4	224	33	26	196	6		
Future Vol. veh/h	2	3	- 4	24	12	25	4	224	33	26	196	.6		
Conflicting Pens, #	å	0	- 7		0	2	- 7	0	- 1	2	0	. 8		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized			None			None	- III	-	None	- 4	577	None		
Storage Length						11117	-	1.0	-					
Veh in Median Storage	#	0	(6	3 .	0	S. In		0	3000	100	- 0			
Grade %		0			0	-	-	0			- 0			
Peak Hour Factor	89	89	89	89	89	69	80	89	89	89	89	89	STATE OF THE PARTY.	
Heavy Vehicles, %	2	2	2	7	2	2	2	2	2	2	. 2	2		
Mymt Flow	2	3	7.4	27	13	28	4	252	37	29	220	7.	-	
Major/Minor	Mino?2	_		Minori		- 177	Valori			Anjor2			-	
Conflicting Flow All	597	589	239	573	574	281	235	0	0	291	0	C		-
	290	290	539	281	281	201			- 11	: Makes	V	-		_
Stage 1	307	299	- 45	207	293	- 17			-	-				
Stage 2		6.52	822	7 12	8.52	6.22	4.12	-	3715	4.12	NEWSAL		The street	No. of Street, or
Critical Howy	7.12 6.12	5.52	1122	5 12	5.52	0,22	4.12	-		4.12		0.00	ARRAM AND ADDRESS OF THE PARTY NAMED IN	
Critical Howy Stg 1	6 12	5.52		B 12	5.52	- NA PA	2017	THE OW	ALIE .	172				
Critical Howy Stg 2			3 318			3 318	2 218	III O. E	0.012	2 218		-		
Follow-up Howy	3518	4 018	800	3518	429		1332	VIDO:	TITAL	127.1	-	-	-	
Pot Cap-1 Maneuver	415	421	800			758	1332	III.	1000	12/1	100		25,22	
Stage 1	718	672	7	724	678	-	-			-	-		-	-
Stage 2	703	666		716	670	1	100	100	1		250			-
Platoon blocked, %	475		700	440	440	74.07.4	1000	. *		THE	-			
Mov Cap-1 Maneuver	375	404	789	412	412	751	1322	ring)	15	1268	7	HITS		
Mov Cap-2 Maneuver	375	404	_	412	412			-	- 4	- 4		1.1		
Stage 1	709	549	-	722	674			1			EX			
Stage 2	655	662	-	585	647			in a		-		Name of	SUEN	44
Approach	68		V	WH			NB		-	88	-			Orig
HCM Control Delay, s	12.3	300		13.2		THE ST	0.1			0.9		The state of	THE REAL PROPERTY.	-
HCM LOS	В		SVIIT	- 8					1001					
Minor Lane/Major Mym		NBL	NB/T	Map	EBLn1V	MDI nd	SBL	SBT	SBR				NA THE	
	-	1322	140/	HOIL	505	508	1269		- Contract					
Capacity (veh/h)			1					- 10	7			-	100	
ICM Lane V/C Ratio		0 003	-	-	0.02		0 023	-0	- 14	_	_	Silver I		
HCM Control Delay (s)		7.7	0	-	12.3	13.2	7.9	- 0	-	A Carrie				

HCM 6th Signalized Intersection Summary 4 Central Ave & Railroad Dr

06/21/2024

	,	-	7	1	—	1	1	1	-	1	1	1
Movement	EBL	EBT	EBR	WBI.	WBT	WBR	NOL	NOT	NBR	SBL	SBT	SBF
Lane Configurations	7	7+			4		7	A fe		-	į.	
Traffic Volume (veh/h)	18	9	46	31	7	- 11	53	595	20	8	438	2
Future Volume (vertifit)	18	9	46	31	7	11	53	595	20	6	438	23
Initial Q (Qb), veh	0	0	0	.0	0	0	0	0	0	0	0	- (
Ped-Bike Adj(A_pbT)	0 98		0 97	0 98		0 99	1 00		0 97	1 00		0.96
Parking Bus, Adj	1 00	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1.00	1.80	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, verution	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate_velvh	20	10	3	34	8	1	58	654	19	7	481	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, vetth	388	185	55	312	58	5	86	1699	49	13	781	
Arrive On Green	0 13	0 13	0 13	0 13	0 13	0.13	0 05	0.48	0.48	0.01	0 44	0.44
Sat Flow, vehills	1383	1371	411	1030	430	35	1781	3523	102	1781	1771	- 51
Grp Volume(v), vehih	20	0	13	43	0	0	58	330	343	7	0	503
Grp Sat Flow(s), velt/fv/n	1383	0	1782	1495	0	0	1781	1777	1849	1781	0	1852
Q Serve(s st. s	0.0	0.0	0.2	0.3	00	0.0	12	44	44	0 1	0.0	7.8
Cycle Q Clear(g_c), s	0.4	0.0	0.2	0.8	0.0	0.0	1.2	4.4	44	0.1	0.0	7.8
Prop.in Lane	1 00		0 23	0.79		0 02	1.00		0.06	1 00		0 04
Lane Grp Cap(c), veh/h	388	- 0	240	375	. 0	0	86	857	891	13	0	817
V/C Ratio(X)	0 05	0.00	0.05	0 11	0 00	0 00	0.67	0.38	0 39	0.52	0 00	0 62
Avail Cap(c_B), venit:	1537	0	1721	1581	0	0	1147	2383	2479	1147	0	2484
HCM Platoon Ratio	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Upsteam Filler(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), sArch	141	0.0	14 1	14.3	0.0	0.0	17 4	6.1	61	18 4	0.0	8 0
Incr Delay (d2), s/yeh	0.0	0.0	0.0	0.1	0.0	0.0	8.7	0.5	0.5	28.3	0.0	1.3
Initial Q Delay(d3), sAsh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ee SackOfQ(50%),veh/ln	0.1	0.0	0.1	0.3	0.0	0.0	0.6	1.0	11	0.2	0.0	2.2
Umag Movement Delay s/veh												
LinGrp Delay(d),streh	14.1	0.0	14.1	14.3	0.0	0.0	26.2	6.6	8.6	46.7	0.0	93
LHGm LOS	В	A	В	В	Α	Α	C	A	Α	D	Α	A
Approach Vol., wh/h		33			43			731			510	
Approach Delay, s/veh		14.1			14.3			8.2			98	
Approach LOS		В			В			A			A	
Tiroir - Assigned Plus	3	2	- Aug	A	5	6		8			- 24	
Phil Duration (G+Y+Rc), s	48	22.5		10.0	8.3	21.0		10.0		ALL DE	STATE OF	(BE)
Change Period (Y+Rc), s	45	4.5		5.0	45	4.5		5.0				
Max Green Setting (Gmax), s	24.0	50.0		36.0	24.0	50.0		36.0	100			
Max Q Clear Time (g_c+l1) s	21	64		24	32	98		2.8				
Green Ext Time (p_c), s	0.0	81	E. I.	0.1	0.1	6.2		0.1	043540	N. T.	- V H	360
Intersection Statemery		300			-	HW	Typ2		EP-	3		
HCM 5th Ctrl Delay	111		9.2		1		100	-			700	
HCM 6th LOS			A									

Traffic Operations Study for the Mickinleyville Town Center Project W. Trans

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Traffic Operations Study for the MicKittleyvilla Town Center Project W-Trans

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HCM 6th AWSC 5 McKinleyville Ave & Hiller Rd

08/21/2024

Intersection Intersection Dolay, s/veh. 13 Intersection LOS B Mevernant
Lane Configurations
Traffic Vol., velvh
Future Vol., velvh
Putak Hour Factor
Hassy Veltuces, %
Mintl Flow
Number of Lanes | CB1 | CB1 | CB2 | Will | Wil Approach Approach

Opporing James

Opporing James

Opporing James

Opporing James

Conflicting Approach Left SB

Conflicting Lanes Left 1

Conflicting Approach Rightle

Conflicting Lanes Right 1

HCM Control Delay 10 1

HCM LOS B | Note at Fig. 1 | Fig. 2 | Fig. 3 | Fig. 2 | Fig. 3 | Fi Eane:
Vol Left, %
Vol Tert, %
Vol Tert, %
Vol Tert, %
Vol Tert, %
Sign Control
Tradic Vol by Lane
LT Vol
Tradic Vol by Lane
LT Vol
Camer Pow Rela
Glemenby Gip
Degree of Usi (X)
Departure Heedway (Hd)
Convergence, Vol
Cab
Services Tene
HOM Lane V/C Ratio Cap Service Time HCM Lane V/C Ratio HCM Control Delay HCM Lane LOS HCM 95th-tile Q

HCM 6th Signalized Intersection Summary 6: Central Ave & Hiller Rd

08/21/2024

	,	-	7	1	+	1	1	†	-	1	1	1	
Movement	EBL	EBT	EBR	WBL	WBT	WER	NEL	NBT	NBR	BOL	SET	BBR	STREET, SQUARE,
Lane Configurations	- 1	1			4		*	410		*	44		
Traffic Volume (veish)	- 41	9	109	11	6	- 2	120	780	23	13	603	36	
Future Volume (vet/h)	41	6	109	11	6	2	120	780	23	13	603	36	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adi(A pbT)	₩ 98		0 97	0.98		1.00	1 00		0 97	1.00		0 97	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approvi	th:	No			No	7		No			No		
Adi Sat Flow, valvivin	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	THE RESERVE
Ad Flow Rate yeh/h	45	7	5	12	7	0	130	848	22	14	655	32	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	8.92	0.92	0.92	0.92	3.92	0.92	0.92	SERVICE N
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	- 2	2	2	
Cap, wrivit	319	86	82	230	67	0	170	1830	47	26	1503	73	CONTRACTOR OF THE PARTY.
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.00	0.10	0.52	0.52	0.01	0 44	0.44	INCOME OF STREET, ST.
Sat Flow, volum	1386	1002	718	308	775	D	1781	3535	92	1781	3442	168	THE PARTY NAMED IN
Grp Volume(v), veh/h	45	0	12	19	0	0	130	426	444	14	338	349	
Grp Sat Flow(s), veh/h/h		0	1718	1583	0	0	1781	1777	1850	1781		1B33	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN
Q Serve(g, s) s	0.7	0.0	0.2	0.0	0.0	0.0	2.6	56	5.6	03	4.9	4.9	A STATE OF THE PARTY OF THE PAR
Cycle Q Clearty o), s	1.0	0.0	0.2	0.3	0.0	0.0	2.6	5.6	5.6	0.3	49	49	MANUFACTURE IN
Prop In Lane	1.00	0.0	0.42	0.63	0.0	0.00	1 00	0.0	0.05	1 00	7.0	0.09	
Lane Grp Cap(c), velvh		0	148	297	0	0	170	920	958	- 26	776	800	CONTRACTOR OF THE PARTY OF THE
V/C Rato(X)	0 14	0.00	0 08	0.06	0.00	0.00	0.76	0 46	0.46	0.54	0.44	0.44	
	1484	0	1592	1581	0	6	1409	2423	2523	1409	2423	2499	THE RESERVE AND ADDRESS OF THE PARTY OF THE
HCM Piatron Ratio	1.00	1.00	1 00	1.00	1.00	1.00	1 00	1.00	1 00	1 00	1 00	1 00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	THE RESERVE OF THE PERSON NAMED IN
Uniform Delay (d) s/vel		0.0	15.4	15.5	0.0	0.0	16.2	5.6	56	17.9	7.2	7.2	The same of the same of
inc Dalay (d2), s/veh	0.3	0.0	0.3	0.1	90	0.0	2.7	0.6	0.6	84		0.6	THE RESERVE OF THE PARTY OF THE
Initial Q Delay(dQ),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ALTO DESCRIPTION OF
%ile BackOfQ(50%),vel		2.0	0.1	0.1	0.0	0.0	1.0	12	1.2	0.1	1.2	13	ACCOUNTS OF THE PARTY.
Unsig Movement Dalay			0.1	U.1	0.0	0.0	1,0	1.2	1.2	9,4	1.2	13	PLANTA DE LA CONTRACTOR
LnGrp Delay(d),s/veh		0.0	15.8	15.6	0.0	0.0	18.9	6.2	6.2	24.4	78	7.8	in the second
LnGrp LOS	8	A.D	B	B	Α.	A	10.9 B	0.2 A	0.2 A	24.4 C	A	A A	
Approach Vol. wehib	D	57	D	D	19	A		1000	A	·	701	A	
		16.0	1150	200	15 6	-		7.9	more e		8.2		
Approach Delay, sively		16.0 B	ulters	CONTRACT OF	150	per cutor			-	-	8.2 A	_	THE RESERVE ASSESSMENT
Approach LOS		В	200	9100	R			A			A		
Timer - Assigned Phs		2	Nº We	4	-5	- 6		- 8		-		page 1	e is a mile and a second
Phs Duration (G+Y+Rc)	, 55.0	23.5		8.2	8.0	20.5		8.2					The state of the s
Change Period (Y+Rc),	\$ 45	4.5		5.0	45	45		5.0					
Max Green Setting (Gm	a29,8	50.0		34.0	29.0	50.0		34.0		SWW.	200	BATE:	THE RESERVE AND ADDRESS OF THE PARTY OF THE
Max Q Clear Time (g c-		7.6		30	4.6	69		23					
Green Ext Time (p_c), s	0.0	11.4	i SE	0.2	0.2	8.3		0.1	In a	-0.7		EVE	APPRECIAL PROPERTY.
Intersection Gurmany	AL .	I SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN ASSESSMENT OF THE PERSON N					OIE-	IS.	u Is	NED:	811	ie Mili	
HCM 6th Ctrl Delay			8.3	West.	44112	SYS S	11/5	-14		1327	More	100	
HCM 6th LOS			A						-	-			

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Traffic Operations Study for the Mickinleyville Town Center Project

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HCM 6th TWSC 7. McKinleyville Ave & Hayes Rd/Heartwood Dr

0	0	n	4	n		2	À
U	9	2		12	v	4	٩

Intersection														
Int Delay s/veh	2.8													
Movement	EBE	EBT	EBR	WBL	WBT	WBR	NEL	WBT	NBR	SBL	SBT	SER		
Lane Configurations		4			4			***			eÎ.			
Traffic Vol. velvh	- 3	3	4	22	4	62	7	234	50	45	150	8		-
Future Vol. veh/h	3	3	4	22	4	62	7	234	-30	45	150	8		
Conflicting Feds, Whr	- 2	- 0	2		- 0	- 1	2	0	- 2	3	0	2		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized			None		E 22	None			None	1	1.	None		
Storage Length						-				-	-	-		
Veh in Median Storage	# .	0	7790	- 4	- 0	II WES	- 7	0	13		0	-	ASSERT	
Grade %	11.	0			0			0			0			
Peak Hour Factor	-89	89	89	89	89	89	88	89	89	89	89	88	22.7	MTV-2
Heavy Vehicles, %	2	2	7	2	2	2	2	2	2	2	2	2		
Mymt Flow	- 3	3	- 4	25	4	70	8	263	34	51	169	9	395	1
MATERIAL SHAPE	- "		-	-	-		1,00	200	- 90		1,00			
Major/Minor 4	Amor2			Migort	570		Unior		1	Aajor 2			-	acilia.
Conflicting Flow All	514	594	179	581	581	286	180	0	D	300	0	0		
Stage 1	278	278		299	299	TEN.			200				La Company	11000
Stage 2	336	316	-	282	282								Z- Usa	
Critical Howy	7.12	6 52	6 22	7.12	6.52	6.22	4 12	-	107	4.12			E 1972	
Critical Howy Stry 1	612	5 52	7.05	6 12	5.52	4100	-		-			-		
Critical Howy Sta 2	6 12	5.52	11.02	6.12	5.52	HIIZ	TO US				115	-	THE PER	12000
Follow-up Hdwy	3 5 18	4.018	3 318	3 518	4 018	3 318	2218			2.218	-	_	- Curan	
Pot Cap-1 Maneuver	404	418	864	425	425	753	1306	- 2		1261	THE R		100	54.5
Stage 1	728	680	001	710	666	11.00	AME.		and a state of		-	-		-
Stage 2	678	655		725	678	u = 22		-	Tall a			100	-	
Platoon blocked %	MINIM.	uuv		LL	010	M.S.VO	- Paris	_	Contribution					
Mov Cap-1 Maneuver	347	395	860	401	401	749	1393			1257	-		-	-
Mov Cap-2 Maneuver	347	395	Juli	401	401	179	(600	-	-	1201	-			
Stage 1	721	648		703	659		200						SHEEDER	BUT THE
Stage 2	605	648		683	646		-	-	-		-		and the same of	-
awyd k	203	040		903	040		ذري		EWE	انسا		oni)		38113
Approach	=		_	WE		SALE	Na			SB				
HCM Control Delay, s	12.7		-	12.2			0.2		1	1.8				1111
HCM LOS	В			В			1000							
BENEFIT OF	16= 3	Pille			TO US	Day.	take:		-	-101-		MO HOLE	ICE I	SCL.
Minor Lane/Major Mym		NBL	NET	NBR			SBL	SBI	SBR				III.	
Dapacity (velvh)		1393		T.F.S	479	506	1257	-	Ser. K			-	-	
HCM Lane V/C Ratio		0.006	-		0 023	0 166	0 04		+			-		
HCM Control Delay (s)		7.4	0	10	12.7	12.2	ň	0			E Comp			96.0
HCM Lane LOS		A	A		В	B	A	A						
HCM 95th %He Q(veh)		6		THE S	0.1	0.6	0.1	100	7 3					

Traffic Operations Study for the MicKinleyville Town Center Project W-Trition

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HCM 6th Signalized Intersection Summary 8 Central Ave & Heartwood Dr

08/21/2024

	,	\rightarrow	1	1	•		1	†	-	1	1	1
Mavament	FRI	EBT	EBR	WEL	WBT	WBR	Nat	NBT	NBR	SBL	8BT	SBR
Lane Configurations		4			4		*	450		7	平5	
Traffic Volume (velids)	- 75	11	85	46	9	42	98	780	56	26	626	73
Future Volume (veh/h)	75	11	85	46	9	42	98	780	56	26	626	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adi(A pbT)	0 99		0 99	0 99		0 97	1.00		0.97	1.00		0 97
Parking Bus, Adi	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/tvln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, velvh	82	12	4	51	10	R.	108	857	54	29	688	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0,91	0.91	0.91	0,91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, velvh	303	28	7	268	50	22	144	1773	112	49	1535	147
Arrive On Green	0 12	0 12	0 12	0 12	0 12	0.12	0.08	0 52	0 52	0.03	0 47	0 47
Sat Flow, veh/h	1240	240	63	1015	418	188	1781	3389	214	1781	3287	313
Grp Volume(v), veh/h	98	0	0	69	0	0	108	449	452	29	374	380
Grp Sal Flow(s), veh/h/hn	1543	0	0	1621	0	0	1781	1777	1825	1781	1777	1803
Q Serve(q s) s	09	0.0	0.0	0.0	0.0	0.0	25	68	68	0.7	60	60
Cycle Q Clear(q c), s	2.3	0.0	0.0	1.5	0.0	0,0	2.5	6.8	6.8	0.7	6.0	6.0
Prop In Lane	0.84		0.04	0.74		0 12	1 00		0 12	1 00		0 17
Lane Grp Cap(c), velvh	339	0	0	340	0	0	144	930	955	49	835	847
V/C Ratio(X)	0.29	0 00	0.00	0 20	0 00	0 00	0.75	0 48	0 48	0 60	0 45	0 45
Avail Cap(c_a), veh/h	1155	0	0	4168	0	0	1010	1848	1898	1010	1848	1875
HCM Platoon Ratio	1.00	100	1 00	1 00	1 00	1 00	1 00	1.00	1 00	1.00	1 00	1 00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), sweh	174	0.0	0.0	17.1	0.0	0.0	190	64	64	20 3	75	7.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	04	0.0	0.0	7.7	0.8	0.8	11.1	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/fn	0.9	0.0	0.0	0.6	0.0	0,0	1.2	1.7	1.8	0.4	17	1.7
Unsig Movement Delay sheh												
LnGrp Delay(d),s/veh	18.1	0.0	0.0	17.5	0.0	0.0	26.7	7.3	7.2	31.5	8.3	8.3
LnGrp LOS	В	Α	A	B	Α	A	C	A	A	C	A	Α
Approach Vol, veh/h		98	1		69			1019			783	
Approach Delay, s/veh		18.1			175			93			92	
Approach LOS		В			В		Lucie,	A			A	
Timer - Jessaned Phy		2	n d	4	5			8				
Phs Duration (G+Y+Rc), s	5.7	27.1		9.5	7.9	24.9	-	9.5		3 1 3 L		
Change Period (Y+Rc), s	45	50		45	4.5	5.0		4.5				
Max Green Setting (Gmax), s	240	44.0		29.0	24.0	44.0		29.0				STATE OF
Max Q Clear Time (g_c+l1) s	27	88		43	4.5	8.0		3.5				
Green Ext Time (p_c), s	0.0	13.3	100	0.7	0.2	10.5	1-1	0.4	SA L	Au.		
Intersection Summary	301	4	and a						- 1	1880		
HCM 6th Ctrl Delay	0.75		100			the latest	1200	100			1	
HCM 6th LOS			A									

Traffic Operations Study for the Mickinleywille Town Center Project W-Trans

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1 McKinleyville Ave & Murray Rd

08/21/2024

HCM 6th AWSC

Intersection

2 Central Ave & Murray Rd

	9119				1	180	1-9	de la constante de la constant	#i 26		
329					100						
0		461.	3416	7.1	Nama	803				-	100
EBL	EBT	EBR	WeL	WBT	WBR	NBL	NBT	NBR	SHL	*8BT	SBF
K	41.		B	♠Ta			44			-24	
24	245	201	83	366	12	266	39	88	28	65	118
24	245	201	63	366	12	266	39	88	28	65	118
0.95	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.98
		2	2			2		2			7
		212									124
1	2	0	1	2	0	0	.1	0	0	1	C
58	1		WB		de l	NB		NE B	\$B		
WB			EB			SB			NB		
3			3			1			1		
SB			NB			EB			WB		
1			1			3			3		
NB			SB			WB			EB		
111	SW	Marie Park	1	95	41000	3			3		
22.1			20 2			66 5			21 1		
C	- 04		C	1011	dill man	F	75	WYE S	C	S	
N	into-4	COlor	CD1.e0	EDI n2	Milliand	Million?	14/06/40	CDbn1		COLUMN TO	HEST.
- 19										1500	1000
NATIONAL PROPERTY.									SENTERE	and the same	CHAUTE II
STATE SALE									201000	-	MEE
PERFO									V/O	PERMIT	-
									1000	SHARK	
									P.Contain	Side of the last	THE REAL PROPERTY.
EWAST.									100	MA CONTRACTOR	CC-EU
and the latest									-	-	
ESTOCK,									Contract of	200,007	224
_									-	-	200
	0 973	0 064	0.41	0.667	0 169	0.616	0 336	0.535		The second	
					9 157	8.63	8 564	8.675	-	-	COOK I
		0.140					0.004				
	8.464	9.119	8.592	8.068			Men	Man			
	8.464 Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NO MILES	VALUE OF THE PARTY	
amazon a	8.464 Yes 430	Yes 392	Yes 418	Yes 448	Yes 391	Yes 419	419	415	100	CAVE S	
	8.464 Yes 430 9.221	Yes 392 6 887	Yes 418 6.36	Yes 448 5.836	Yes 391 6 926	Yes 419 6 399	419 6 333	415 6 447	V 22		
	8.464 Yes 430 9.221 0.963	Yes 392 6 887 0.064	Yes 418 6.36 0.411	Yes 448 5.836 0.668	Yes 391 6 926 0,169	Yes 419 6 399 0.613	8 333 0.337	415 6 447 0.535	MER MILE		
	8.464 Yes 430 9.221	Yes 392 6 887	Yes 418 6.36	Yes 448 5.836	Yes 391 6 926	Yes 419 6 399	419 6 333	415 6 447			
	D EBIL 1 24 24 0 95 2 25 1 58 WB 3 SB 1 NB 11 22.1 C	D EBL EBT 24 245 24 245 0 95 0.95 2 2 2 25 258 1 2 EB WB 3 SB 1 NB 1 1 22 1	BEL EBT EBR. 1 1 1 2 2 24 245 201 24 245 201 25 25 25 25 25 27 2 2 2 2 2 2 2 2 2 2 2	Tebl. EBI EBR WEL Tebl. Tebl. Wel Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl. Tebl	BEBL EBT EBR WEL WB	Tebl. EBI. EBR. WEL. WBT WBT The color WBT The color The color	Tebl. EBT EBR WEL WBT WBR NeL WBT WB	Tebl. EBI EBR WSL WBT WBR NBL NST	Tebl. EBI EBR WEL WB WBR Mel. MBR MB	Tebl	Tebl

110141.00	0		-	-			2000000	The same of	10000	-	THE RESERVE AND ADDRESS OF THE PARTY OF THE
HCM LOS	C	200	C		- N	D	100		E	LIVE	The second second
Calring	NShint	NBL nd	EBLA	HHIM2	ERL no	WHERE	Vall az	\$91 m1	BBL n2	SP na	
Vol Left, %	100%	1	-	0%	0%		0%	100%	0%	0%	
Vol Thru, %	0%	79%	0%	100%	0%	0%	85%	0%	100%	8%	The same of the sa
Vol Right, %	0%	21%	0%	0%	100%	0%	14%	0%	0%	100%	
Sign Control	Stop	Stop	Stop	Stop	Slop	Stop	Slop	Slop	Slop	Stop	
Traffic Vol by Lane	201	380	87	33	194	80	112	9	335	123	
LT Vol	201	0	87	0	Ū	08	0	9	0	0	
Through Voi	0	238	0	33	0	0	96	0	335	0	
RT Vol	0	52	0	0	194	0	16	0	0	123	
Lane Flow Rate	212	316	92	35	204	84	118	9	353	129	
Geometry Grp	- 6	- 6	6	6	8	6	6	6	5	5	
Degree of Util (X)	0 529	0.731	0.248	0 089	0 483	0.236	0 31	0 024	0.845	0.285	
Departure Headway (Hd)	8.998	8.339	9 745	9.23	B.507	10.083	9.463	8.144	8.631	7.912	
Convergence_Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cap	400	433	368	388	423	358	380	391	470	453	The state of the state of
Service Time	6 755	6 095	7.508	6.992	6.269	7.85	7.23	6 902	6.389	5 67	
HCM Lane V/C Ratio	0.53	0.73	0.25	0.09	0.482	0.236	0.311	0.023	0.84	0.285	A A STORY
HCM Control Delay	21.5	30.7	15.7	129	10	16	165	121	43.7	138	
HCM Line LOS	C	- 0	- 0	B	C	C	C	8	E	В	THE RESERVE AND ADDRESS OF THE PARTY.
HCM 95th Ne O	3	5.8	1	0.3	2.9	0.9	13	0.1	8.1	1.2	

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

AM Future 2045 plus Project Page 1

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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HCM 6th TWSC 3 McKinleyville Ave & Railroad Dr

08/21/2024

Intersection		1		-0.0		الطلية						A PARTY	
Int Delay s/veh	B												
Movement	EBL	EBT	EBR	WEL	WBT	WBR	NBL	NBT	NER	SEL	807	SBR	di-
Lane Configurations		44		- 78	44			44.			+\$+		
Traffic Vol, veh/h	. 8	4	8	109	8	74	3.	265	136	190	332	-2	
Future Vol. ven/h	0	4	. 8	109	. 8	74	3	265	136	-90	332	.2	
Conflicting Peas, Whr	- 0	- 0	- 2	1	- 0	8	. 2	0	1	- 8	0	- 9	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	Maria.	-	None	THE R. P. LEWIS CO., LANSING	a ur	None			None	FIRT.	-	None	LAST STATE OF
Storage Length										-		NA 514 X (10 A)	
Veh in Median Slorage		0		18-	. 0		-	0		= 12	0	24.0	
Grade %	100	0	-		0			0		-	0	-	
Peak Hour Factor	.95	95	95	95	95	95	- 05	95	95	95	95	95	
Henry Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mymt Flow	- 8	4	8	115	8	78	3		143	05	349	2	AND RESIDENCE OF THE PERSON NAMED IN
441													
Major/Minor	Minor2	33 2	E/E/E	Minori		- 4	dajort.		-	to or2		10 L	
Conflicting Flow All	958	985	361	913	915	368	380	0	0	430	D	0	
Stage 1	549	549		365	365	-	-	1 1 12	S WAT			-	
Stage 2	409	436		548	550							1.0	
Critical Howy	7 12	6.52	6.22	7.12	6.52	8-22	4.12		2000	4.12	150	-	THE SHAPE IN
Critical Howy Start	6 12	5 52	4	6 12	5 52	-	-	-		1	-		
Critical Howy Stg 2	6.12	5.52		6.12	5.52	-			Ly	100	1		ALC: NO. 124
Follow-up Hdwy	3 5 1 8	4.018	3 318	3518	4 018	3 318	2218			2 218	-	- +	
Pot Cap-1 Maneuver	237	248	084	254	273	677	1199		- 4	1129		100	
Stage 1	520	516	100	654	623		-		-	14		-	
Stage 2	619	580		521	516	DOW T	- 2	1 14	-14	16	100	221	A SHARL SHARL AND ADDRESS OF THE PARTY OF TH
Platoon blocked %	-								-		-	-	
Mov Cap-1 Maneuvir	184	217	677	225	239	666	1189		-	1120	-		All the second
Mov Cap-2 Maneuver	184	217	-	225	239	-	-	-		IN CONTRACT OF	-	_	
Stage 1	514	458	100	847	616	-	1112	100	W.F.	-	1		The same
Stage 2	533	574		455	458	_	_		-			14	
STATE OF THE PERSON NAMED IN									300	1			S. C. Charles
Approach	EB	e v		WB		1.050	NB		The second	SB		E 14 -	
HCM Control Delay, s	19.4	Table 1	7,23	37.2	\$ C*	92.	0.1		100	1.8	1/4		A CONTRACTOR
HCM LOS	С			E									
		a Aven			-44	- 4	27			125		-	A STATE OF THE STA
Minor Lane/Major Myrr	nt .	NBL	MET	NER	SBLndV		SBL	SBT	SBR			4	Charles San
Capacity (vet/h)	=111	1189	3(4	7 E	271	304	1120		1111				
HCM Lane V/C Rate	_	0.003	-14			0 661	0 085						
HCM Control Delay (a)		В	0		19.4	37.2	8.5	0		Table 5		000	
201 and LUCH		A	1.8		P	E		20					

HCM 6th Signalized Intersection Summary 4 Central Ave & Railroad Dr

08/21/2024

## PRI 46 45 0 1.00 No 1870 48 0.95 561 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	127 127 0 0 93 1 1 0 0 1870 88 0 95 2 2 254 0 25 1029 136 1590 4 7	85 85 0 0 97 1.00 1870 89 0 95 2 229 0 25 579 1126 47	WBT 26 26 0 1.00 No 1870 27 0.95 2 72 0.25 292	50 50 0 0 97 1 00 1870 34 0.95 2 63 0 25 255	119 119 0 1 00 1 00 1 00 1 25 0 95 2 1 59 0 09	NBI 511 511 0 100 No 1870 538 0.95 2 797 0.47	67 67 0 0.95 1.00 1870 48 0.95 2 71 0.47	101 101 0 100 100 100 106 0.95 2 136	610 610 610 0 1 00 No 1870 642 0 95 2 748	0 95
46 46 0 1.00 No 1870 48 0.95 2 138 0.25 561 0 0 0 0.0	127 0 93 1.00 1870 88 0.95 2 254 0.25 1029 136 1590 4 7	85 0 0 97 1.00 1870 89 0 95 2 229 0 25 579 150 1126	26 26 0 1.00 No 1870 27 0.95 2 72 0.25 292	50 0 0 97 1 00 1870 34 0.95 2 63 0 25	119 0 1 00 1 00 1 00 1 25 0 95 2 159 0 09	511 511 0 1 00 No 1870 538 0.95 2 797	67 0 0.96 1.00 1870 48 0.95 2 71	101 101 0 100 100 100 1870 106 0.95	610 610 0 1.00 No 1870 642 0.95	1870 79 1.00 1870 79 0 95
46 0 1.00 No 1870 48 0.95 2 138 0.25 561 0 0 0.0	127 0 93 1.00 1870 88 0.95 2 254 0.25 1029 136 1590 4 7	85 0 0 97 1.00 1870 89 0 95 2 229 0 25 579 150 1126	26 0 1.00 No 1870 27 0.95 2 72 0.25 292	50 0 0 97 1 00 1870 34 0.95 2 63 0 25	119 0 1 00 1.00 1.00 1870 125 0.95 2 159 0.09	511 0 1 00 No 1870 538 0.95 2 797	67 0 0.96 1.00 1870 48 0.95 2 71	101 0 1 00 1 00 1 00 1870 106 0.95 2	610 0 1.00 No 1870 642 0.95	1870 79 1.00 1870 79 0 95
1,00 No 1870 48 0,95 2 138 0,25 561 0 0	0 0 93 1 00 1870 88 0.95 2 254 0.25 1029 136 1590 4 7	0 0 97 1.00 1870 89 0 95 2 229 0 25 579 150 1126	1,00 No 1870 27 0.95 2 72 0.25 292	0 0 97 1 00 1870 34 0.95 2 63 0 25	1 00 1 00 1 00 1 1 00 1 1 25 0 95 2 1 59 0 09	0 1 00 No 1870 538 0 95 2 797	0 0.96 1.00 1870 48 0.95 2 71	0 1 00 1 00 1 870 106 0.95 2	1.00 No 1870 642 0.95	1870 75 0 95
1.00 No 1870 48 0.95 2 138 0.25 561 0 0	0 93 1 20 1870 88 0 95 2 254 0 25 1029 136 1590 4 7	0 97 1.00 1870 89 0 95 2 229 0 25 579 150 1126	1.00 No 1870 27 0.95 2 72 0.25 292	0 97 1 00 1870 34 0.95 2 63 0 25	1 00 1.00 1870 125 0.95 2 159 0.09	1 00 No 1870 538 0.95 2 797	0.95 1.00 1870 48 0.95 2 71	1 00 1 00 1870 106 0.95 2	1.00 No 1870 642 0.95	0 97 1.00 1870 79 0 95
No 1870 48 0.95 2 138 0.25 561 0 0 0.0	1.00 1870 88 0.95 2 254 0.25 1029 136 1590 4.7	1.00 1870 89 0.95 2 229 0.25 579 150 1126	No 1870 27 0.95 2 72 0.25 292	1 00 1870 34 0.95 2 63 0 25	1.00 1870 125 0.95 2 159 0.09	No 1870 538 0.95 2 797	1.00 1870 48 0.95 2 71	1.00 1870 106 0.95 2	No 1870 642 0.95	1.00 1870 79 0 95
No 1870 48 0.95 2 138 0.25 561 0 0 0.0	1870 88 0.95 2 254 0.25 1029 136 1590 47	1870 89 0.95 2 229 0.25 579 150	No 1870 27 0.95 2 72 0.25 292	1870 34 0.95 2 63 0.25	1870 125 0.95 2 159 0.09	No 1870 538 0.95 2 797	1870 48 0.95 2 71	1870 106 0.95 2	No 1870 642 0.95	1870 79 0 95
1870 48 0.95 2 138 0.25 561 0 0 0.0	88 0.95 2 254 0.25 1029 136 1590 4.7	89 0.95 2 229 0.25 579 150	1870 27 0.95 2 72 0.25 292	34 0.95 2 63 0.25	125 0.95 2 159 0.09	1870 538 0.95 2 797	48 0.95 2 71	106 0.95 2	1870 642 0.95	79 0 95
48 0.95 2 138 0.25 561 0 0 0.0	88 0.95 2 254 0.25 1029 136 1590 4.7	89 0.95 2 229 0.25 579 150	27 0.95 2 72 0.25 292	34 0.95 2 63 0.25	125 0.95 2 159 0.09	538 0.95 2 797	48 0.95 2 71	106 0.95 2	642 0 95 2	79 0 95 2
0.95 2 138 0.25 561 0 0 0.0	0.95 2 254 0.25 1029 136 1590 4.7	0.95 2 229 0.25 579 150 1128	0.95 2 72 0.25 292	0.95 2 63 0.25	0.95 2 159 0.09	0.95 2 797	0 95 2 71	0.95	0.95	2
2 138 0.25 561 0 0 0 0	2 254 0 25 1029 136 1590 4 7	2 229 0 25 579 150 1126	72 0 25 292 0	63 0 25	159 0 09	2 797	2 71	2	2	0 95 2 92
138 0.25 561 0 0 0 0.0	254 0 25 1029 136 1590 4 7	229 0 25 579 150 1126	72 0 25 292 0	63 0.25	159 0 09	797	71			
0.25 561 0 0 0 0 0.0	0.25 1029 136 1590 4.7	0 25 579 150 1126	0 25 292 0	0.25	0.09			136	748	07
0 0 0 0 0 0.0	136 1590 47	579 150 1126	292			0.47	0.47			
0 0 0 0 0.0	136 1590 4.7	150 1126	0	255	1 1 1 mm		0.41	0.08	0.46	0.46
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0.0			0	0	1781	0	1838	1781	0	1827
_	47	4.7	0.0	0.0	4.5	0.0	163	39	0.0	23 2
_		9.3	0.0	0.0	4.5	0.0	16.3	3.9	0.0	23.2
	0.65	0.59		0 23	1.00		0.08	1.00	-	0 11
0	392	364	0	0	159	0	868	136	0	841
0 00	0 35	0.41	0.00	0 00	0.79	0.00	0.68	0.78	0.00	0.86
0	603	545	0	0	162	0	960	189	0	983
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1 00
0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
0.0	20 5	228	0.0	0.0	294	0.0	135	29 9	0.0	159
0.0	0.2	0.3	0.0	0.0	22.0	0.0	2.2	12.9	0.0	77
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	1.7	2.0	0.0	0.0	2.8	0.0	8.2	20	0.0	9.9
			-	(6)(6)	-				10.12	
0.0	20.7	23 1	0.0	0.0	51.5	0.0	158	42.8	0.0	23.6
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		the state	150	THE PERSON	- 195	711	VIII I		827	-
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	204 20 4	204 20 4 C 2- 35.7 4 5 34.5 18 3	204 20 4 C 2 4 35.7 21.3 4 5 50 34 5 25.0 18 3 6 7 5.4 0.6	204 150 204 231 C C C 2 4 5 357 213 99 45 50 40 345 250 80 183 67 65 54 0.6 00	204 150 204 231 C C 2 4 5 4 35.7 21.3 9.9 34.9 45 50 40 45 345 250 60 35.5 183 67 65 252 54 0.6 0.9 51	204 159 204 231 C C C 2 4 5 4 35.7 21.3 9.9 34.9 4.5 50 4.0 4.5 34.5 250 8.0 35.5 18.3 6.7 6.5 25.2 5.4 0.6 0.0 5.1	204	204	204 150 711 204 221 219 C C C C 2 4 5 4 8 35.7 21.3 9.9 34.9 21.3 45 50 40 45 50 345 25.9 60 35.5 25.0 183 67 6.5 252 113 54 0.6 0.0 51 0.5	204 159 771 827 204 231 219 260 C C C C C 2 4 5 4 8 357 213 93 49 213 45 50 40 45 50 345 250 80 355 250 183 67 65 252 113 54 0.6 0.0 51 0.5

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Future 2045 plus Project Page 3

Traffic Operations Study for the MicKinleyville Town Center Project W Trans

AM Future 2045 plus Project Page 4

HCM 6th AWSC 5 McKinleyville Ave & Hiller Rd

08/21/2024

	h80.7														
Intersection LOS	F	\$ 1 E	83	236		FIFE		750	EVASU.		WES		3 J E	200	2723
Movement	EBL	EBT	EBR	WEL	WBT	WER	NEL	NBT	NER	SBL	SBT	SBR	NO.15		SILE.
Lane Configuratoris	7	*	1	*	1	*		4			ofo				
Traffic Vol, veh/h	44	47	58	236	44	145	30	225	307	198	239	20			
Future Vol., veh/h	44	47	58	236	44	145	30	225	302	198	239	20			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0:95	0.95			
Heavy Vehicles %	2	2		2	2	2		2	2	2	2	2			
Mymt Flow	46	49	61	248	46	153	32	237	318	208	252	21			
Number of Lanes	1	1	1	1	\$.1	0	1.8	0	0	1	0			
Approach	EB		4	WB	4	21112	NB	MU	-	SB	MARCH !		E.C	Salas	
Opposing Approach	WB			EB			SB			NB					
Opposing Lanes	3	200	231	3	MINU.	8300	1		Uttle:	1	325	CHANGE	Her	HA	ALV.
Conflicting Approach Le	ft SB			NB			EB			WB					
Conflicting Lanes Left	-11			134.1	TIST.		3			3					
Conflicting Approach Rig	BKH			S8	_		WB			EB					
Conflicting Lenes Right	1		2150	1	50.71	The same	3		530	3	PEN	FEDERAL STATE			
HCM Control Delay	14.1		- more	20.8			138 6			875					
HCM LOS	В		200	C	100.711	100 AU	t	- 10		F			GP2X	1-1-5	
HOM EOG	. 0		-	·	M. Committee								-11	-	alterna .
TION EOG				v	A.Company				elic) des	T.		S. Park			
		BLot	EBLAT		EBen3	VELOT	WELD2N	/ELis	SELnt						
Eane		Buil 5%			0%	VELAT	- Transfer	VHL 113*	68Ln1 43%						
Esne Volleft %			100%	B£n2		100%	WELD2				OHE			11518	
zane Vol Left, % Vol Thru, %		5%	100%	BLn2 0%	0%	100%	0% 100%	0%	43%		WIII			11513	
eane Vol Left, % Vol Thru, % Vol Right, %		5% 40%	100%	0% 108%	0%	100%	0% 100%	0% 0%	43% 52%		MILE MILE			11518	
eane Vol Left % Vol Thru, % Vol Right % Sign Control		5% 40% 54%	100% 0% 0%	0% 108% 0%	0% 0% 100%	100% 0% 0%	0% 100% 0%	0% 0% 100%	43% 52% 4%		OH5			1158 570	
zane Vol Left, % Vol Thru, %		5% 40% 54% Stop	100% 0% 0% Stop	0% 108% 0% Stop	0% 0% 100% Stop	100% 0% 0% Stop	0% 100% 0% Slop	0% 0% 100% Stop	43% 52% 4% Stop					1158 158 158 158 158 158	
vol Left. % Vol Tivru, % vol Right. % Stontrol Traffic Vol by Lane		5% 40% 54% Stop 557	100% 0% 0% Stop 44	0% 108% 0% Stop 47	0% 0% 100% Stop 58	100% 0% 0% Stop 236	0% 100% 0% Slop 44	0% 0% 100% Stop 145	43% 52% 4% Stop 457		OIIE OIS			11518	
une Vol Left % Vol Thru, % Vol Right % Sign Control Thraffic Vol by Lane TVol 3 Through Vol		5% 40% 54% Stop 557 30	100% 0% 0% Stop 44 44	0% 108% 0% Stop 47	0% 0% 100% Stop 58	100% 0% 0% Stop 236 236	0% 100% 0% Slop 44	0% 0% 100% Stop 145	43% 52% 4% Stop 457 198						
Cane Vol Left % Vol Trvu, % Vol Right % Sign Control Traffic Vol by Lane T. Vol 5 Through Vol RT Vol.		5% 40% 54% Stop 557 30 225	100% 0% 0% Stop 44 44	0% 108% 0% Step 47 0	0% 0% 100% Stop 58 0	100% 0% 0% Stop 236 236	0% 100% 0% 5lop 44 0	0% 10% 100% Stop 145 0	43% 52% 4% Stop 457 198 239					115R 57Q	
une Vol Left % Vol Thru, % Vol Right % Sign Control Thraffic Vol by Lane TVol 3 Through Vol		5% 40% 54% Stop 557 30 225 302	100% 0% 0% Stop 44 44 0	0% 108% 0% Sbp 47 0 47	0% 0% 100% Slop 58 0 0	100% 0% 8top 236 236 0	0% 100% 0% Slop 44 0 44	0% 0% 100% Stop 145 0 0 145	43% 52% 4% Stop 457 198 239 20					57(6)	
vol Left. % Vol Left. % Vol Right. % Sign Control raffic Vol by Lane _T. Vol b Through Vol XT Vol. aane Flow Rate Jeonety Grp		5% 40% 54% Stop 557 30 225 302 586 5	100% 0% 0% Stop 44 44 0 0 46 S	0% 100% 0% Stop 47 0 47 0 49 5	0% 0% 100% Stop 58 0 0 58 61	100% 0% 6top 236 236 0 248 5	0% 100% 0% Slop 44 0 44 0 46 5	0% 0% 100% Stop 145 0 145 153	43% 52% 4% Stop 457 198 239 20 481					115 H	
Lane Vol Left % Vol Ryu, % Vol Right % Sign Control Traffic Vol by Lane .T Vol Trough Vol Tr Vol, ane Flow Rate Secometry Grp Legree of Util (X)		5% 40% 54% Stop 557 302 225 302 586 5 1.213	100% 0% 0% Stop 44 44 0 0 46 S	0% 109% 0% Stop 47 0 47 0 49 5	0% 0% 100% Slop 58 0 0 58 81 5	100% 0% 6top 236 236 0 248 5	0% 100% 0% Slop 44 0 44 0 46 5	0% 0% 100% Stop 145 0 0 145 153 5	43% 52% 4% Stop 457 198 239 20 481 5					115 H	
Cane Vol Left, % Vol Thru, % Vol Right, % Sign Control Traffic Vol by Lane T. Vol.> Through Vol XT Vol. Lane Flow Rate Geometry Grp Legree of Util (X) Legarture Headway (Hol		5% 40% 54% Stop 557 302 225 302 586 5 1.213	100% 0% 0% Stop 44 44 0 0 46 5	0% 109% 0% Stop 47 0 47 0 49 5	0% 0% 100% Slop 58 0 0 58 81 5	100% 0% 0% Stop 236 236 0 0 248 5 0.607	0% 100% 0% Slop 44 0 44 0 46 5	0% 0% 100% Stop 145 0 145 153 5	43% 52% 4% Stop 457 198 239 20 481 5						
Cano Vol Left. % Vol Thru, % Vol Thru, % Vol Thru, % Vol Right. % Sign Confrol Traffic Vol by Lane T. Vol by Through Vol RT Vol t, ane Flow Rate Seometry Grp Jegree of Util (X) Jeparture Headway (Hd Convergence YN		5% 40% 54% Stop 557 30 225 302 586 5 1.213 7.822	100% 0% 0% Stop 44 44 0 0 46 5 0 124 10.616	0% 108% 0% Step 47 0 47 0 49 5 0 126 10.08	0% 0% 100% Stop 58 0 0 58 61 5 0 144 9 33	100% 0% 0% Stop 236 0 0 248 5 0.607 9.573	0% 100% 5lop 44 0 44 0 46 5 0 107 9.043	0% 0% 100% Stop 145 0 145 153 5 0 322 8 301	43% 52% 4% Stop 457 198 239 20 481 5 1 054 8.388						
Vol Left. % Vol Left. % Vol Tyru, % Vol Right. % Sign Control of Traffic Vol by Lane . I. Vol 3. Through Vol XI Vol J. Ame Flow Rate Beemely Grp Degree of UB (X) Departure Headway (Hd Dowergence, YM Zipp		5% 40% 54% Step 557 30 225 302 586 5 1.213 7.822 Yes 481	100% 0% 0% Stop 44 44 0 0 46 5 0 124 10.616 Ves	0% 108% 0% Step 47 0 47 0 49 5 0 126 10.08 Yes	0% 100% Stop 58 0 0 58 61 5 0 144 9 33 Yes 386	100% 0% 0% Shop 236 236 0 248 5 0.607 9.573 Yes	0% 100% 0% 5lop 44 0 46 5 0 107 9 043 Yes 399	0% 0% 100% Stop 145 0 145 153 5 0 322 8 301 Yes 437	43% 52% 4% Stop 457 198 239 20 481 5 1 054 8.388 Yes						
Lane Vol Left. % Vol Turu, % Vol Rynt, % Vol Rynt, % Vol Rynt, % Volgo Control Traffic Vol by Lane T. Vol J. Traffic Vol by Lane T. Vol J. Sane Flow Rate Seemeiry Grp Joeg ee of US (X) Separature Headway (Hof Downeygence, YN Sep Service Time		5% 40% 54% Stop 557 30 225 302 586 5 1 213 7 822 Yes 481 5 322	100% 0% 0% Stop 44 44 0 0 46 5 0 124 10.616 Ves 340 8 316	0% 0% 0% Step 47 0 47 0 49 5 0 126 10.08 Yes 356 7 78	0% 0% 100% Stop 58 0 0 58 61 5 0 144 9 33 Yes 386 7 03	100% 0% Stop 236 236 0 248 5 0.607 9.573 Yes 380 7.273	0% 100% 0% Slop 44 0 44 0 46 5 0 107 9 043 Yes 399 6 743	0% 0% 100% Stop 145 0 145 153 5 0 322 8 301 Yes 437 6 001	43% 52% 4% Stop 457 198 239 20 481 5 1 054 8.388 Yes 438						
Cane Vol Left, % Vol Thru, % Vol Thru, % Vol Right, % Sign Control Traffic, Yol by Lane LTVol; Anne Flow Rate Seemely Grp Begree of USI (X) Departure Hashaway (Hof Convergence, YN) Zip Fire Convergence, YN Zip Fire Conver		5% 40% 54% Stop 557 30 225 302 586 5 1.213 7.822 Yes 481 5.322 1.218	100% 0% 0% Stop 44 44 0 0 46 5 0 124 10.616 Yes 340	0% 108% 0% Stop 47 0 47 0 49 5 0 126 10.08 Yes 356 778 0.137	0% 0% 100% Slop 58 0 58 61 5 0 144 9 33 Yes 386 7 03 0,158	100% 0% Stop 236 236 0 248 5 0.607 9.573 Yes 380 7.273	0% 100% 0% Slop 44 0 46 5 0 107 9 043 Yes 399 6 743 0 115	0% 0% 100% Stop 145 0 145 153 5 0 322 8 301 Yes 437 6 001 0 35	43% 52% 4% Stop 457 198 239 20 481 5 1 054 8.388 Yes 438 6 088 1 098						
Lane Vol Left. % Vol Turu, % Vol Rynt, % Vol Rynt, % Vol Rynt, % Volgo Control Traffic Vol by Lane T. Vol J. Traffic Vol by Lane T. Vol J. Sane Flow Rate Seemeiry Grp Joeg ee of US (X) Separature Headway (Hof Downeygence, YN Sep Service Time		5% 40% 54% Stop 557 30 225 302 586 5 1 213 7 822 Yes 481 5 322	100% 0% 0% Stop 44 44 0 0 46 5 0 124 10.616 Ves 340 8 316 0 135	0% 0% 0% Step 47 0 47 0 49 5 0 126 10.08 Yes 356 7 78	0% 0% 100% Stop 58 0 0 58 61 5 0 144 9 33 Yes 386 7 03	100% 0% 0% Shop 236 236 0 0 248 5 0,607 9,573 Ves 380 7,273 0,653	0% 100% 0% Slop 44 0 44 0 46 5 0 107 9 043 Yes 399 6 743	0% 0% 100% Stop 145 0 145 153 5 0 322 8 301 Yes 437 6 001	43% 52% 4% Stop 457 198 239 20 481 5 1 054 8.388 Yes 438 6 088						

HCM 6th Signalized Intersection Summary 6 Central Ave & Hiller Rd

08/21/2024

	×		*	1	—	1	1	1	-	1	1	1		
Movement	EBL	EBT	EBR	WEL	WBT	WER	NBL	NBI	MBR	SEL	SBT	SBR	MILES.	S-XII
Lane Configurations	7	1.	- Table	V 11.28	4		7	1		×	7.			
Traffic Volume (veluh)	177	- 1	223	2	1	0	239	554	3	3	511	209		
Future Volume (vets/h)	177	1	223	2	1	0	239	554	3	3	611	209		
Initial Q (Qb), veh	0	0	0	0	0	- 0	0	0	0	0	0	0	No. of Parties	The latest to
Ped-Bike Adi(A_pbT)	0 99		0.99	1.00		1.00	1.00		1.00	1.00		0.98		
Parking Bus. Ad	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	1.00	1.00		William.
Vork Zone On Appraise		No			No	-		Na	-	100	No		-interesting	-
Adj Sat Flow, vehilin	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	THE PARTY	NEWST
Adj Flow Rate, veh/h	186	1	162	2	1	0	252	583	2	3	643	216		-
Peak Hour Factor	0.95	0.95		D 95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	VAUSTONS	HALL PAR
Percent Harry Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	OR STREET	SECTION AND
Cap, velvh	332	2	277	148	68	0	280	1211	4	6	680	222	I SHIP SHOW	PARKET
Arrive On Green	0.18	0 18	0.18	0.18	0 18	0 00	0 16	0.65	0.65	0.00	0.50	0.50	NA ALTONO	A CHEST
	1408	to	1564	425	340	3	1781	1863	0.03 B	1781	1331	447		05600
The second state of the second													1200	
Grp Volume(v) veh/h	188	0	163	3	0	0	252	0	585	3	0	859		
ap Sat Flow(s) voishift		C	1573	766	0	0	1781	0	1869	1781	0	1779		
Serve(q_s), s	2.8	0.0	7.9	0.0	0.0	0.0	11.5	0.0	13.2	0.1	0.0	38 9		
cycle Q Clearing of a		0.0	7.9	7.9	0.0	0.0	11.5	0.0	13.2	0.1	0.0	38.9		
Prop In Lane	1.00		0.99	0 67		0.00	1 00		0.00	100		0.25		
ane Grp Cap(c), vieluli		0	279	208	0	0	280	0	1215	6	0	882		
//C Flatto(X)	0.56	0.00	0 58	0.01	0.00	0 00	0 90	0.00	0.48	0.52	0.00	0 97		
waif Cap(c_a), veist	45百	0	419	331	0	0	280	0	1215	86	D	883		
ICM Platoon Ratio	1.00	1.00	1 00	1 00	1.00	1 00	1.00	1 00	1 00	100	1.00	1.00		
Jostream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1 00		
Iniform Delay (d) siveh	32 4	0.0	312	28.3	00	0.0	34 2	0.0	7.4	41.1	0.0	20 3		
nor Detay (d2), siveh	21	0.0	2.8	0.0	0.0	0.0	28 6	0.0	0.5	24.7	0.0	24.1	POZICIEDN	The same of
nitial Q Delay(d3) siveh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
file BackOfQ(50%), veh		0.0	3.1	0.1	0.0	0.0	7.0	0.0	4.4	0.1	0.0	20.0	V = 0.24	NAME OF THE OWNER, OWNE
Insig Movement Dalay			-		A. T. S.					411	0.0	2010	-	Acceptable to
nGrp Delay(d), siven		0.0	34.0	28.3	0.0	3.0	62.7	0.0	7.9	65.8	0.0	44.4	-	DESCRIPTION OF
#Grp LOS	C	A	C	C	A	A	E	A	A	E	A	D	-	-
oproach Vol. veluh	-	340	-		3	-	-	637	_	-	862		and the same	-
	DOM:	34.2	III-P	SAME	28.3	3.55		24.4		1 1	44.4	EHC SI	Name of Street,	
opmach Delay, siveh loproach LOS	_	36.2	_		28.3 C	_		Z4.4			44.4 D		-	
The state of the s		minya.	203	-15		ADA		-			В	DECME?	Marie Con	
mer - Addigned Pho	_10	2.	A 57	1	- 5	6	0	8	-01			and the		-
hs Duration (G+Y+Rc),		58.2	216	19.6	17.5	45.5	1100	19.6	100	Electric services		200	STATE OF	
hange Period (Y+Rc).		45		5.0	45	4.5		5.0						
fax Green Setting (Grin		50.0	-	22.0	13.0	41.0		22.0						
fax Q Clear Time (g_c+		15.2		12.5	13.5	40.9		9.9						
Green Ext Time (p_c), s		7.3	11/1	1.5	0.0	0.1	S SEE	0,0	- 4	10		100	101	17 14
ntersection Survivary	III.		THE W			WES.	A. E	1	-	100			W. Hall	-
CM 5th Ctrl Deiny	1	OWN	34.5	1000	201	WILL		TENT	117 00	165	F CEAN	STATE OF THE PARTY OF		
CM 6th LOS			C											

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HCM 6th TWSC 7. McKinleyville Ave & Hayes Rd/Heartwood Dr

					124
- 3	15	3/4	14	-0	12.5

Total Common Chinase	-										-		_	-	
Intersection Int Delay, s/veh	6						-			-		-	-	154	-
		22			_										
Movement	EBL	EBI	E8R	WBL	WBT	WER	NBL	NBT	NER	SBL	SBT	SBR		200	10.0
Lane Configurations		6		100	+40		-	4			4				
Traffic Vol, veh/h	8	6	- 8	29	2	183	6	354	14	167	371	7			
Future Vol. veh/h	#	- 6		29	2	183	6	354	14	167	371	7			
Conflicting Peds, #hr	0		0	3	0	3	0	0	3	3	0	0			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	From	Free	Free	Free			
RT Channelized		-	None	100	17	None	-	Tile.	None	577		None			
Storage Length												-			
Veh in Median Storage,	# .	0			0			0		-	0				
Grade %		0	-	1,00	0			G		-	0				
Peak Hour Factor	05	95	95	95	95	95	95	95	95	95	95	95			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2			
Mymt Flow	- 8	6	8	31	2	193	- 4	373	15:	176	391	7			
				H			Winds			AND THE PERSON NAMED IN					
	linor2	_		Minor			Majort	_		fajor2	_	-	_		
Conflicting Flow All	1240	1150	398	1153	1146	387	398	0	D	391	Ü	0	-		_
Stage 1	747	747	T-S	396	396	10	10 -	-	10.00		-1				
Stage 2	493	403	NAME OF TAXABLE	757	750	4-1-1	market .	4	and the same	orner.	-	- 4:		_	
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	+		4.12	4				
Critical Howy Stg 1	6 12	5 52		6 12	5 52	1.6		-				1 9			
Critical Holwy Stg 2	6.12		1164	6.12	5.52	200		- 4			- 10	4			
	3 5 1 8	4018	3 318		4 018		2.218	-		2 218					
Pot Cap-1 Maneuver	152	198	657	174	199	861	1161	COL	-	1108		1.50		That is	1
Stage 1	405	420		629	604	-		1				-			
Stage 2	558	600	118	400	419					-	- (1)	-	-	And the last	
Platoon blocked %															
Mov Cap-1 Maneuver	90	158	650	140	159	857	1161			1165		-	12016	SALT.	
Mov Cap-2 Maneuver	90	158		140	159					-					
Stage 1	402	339	100	623	598	STOP		- 1		1 4	- 8		-		
Stage 2	389	594	-	311	338	1	-	-				-	-		
Approach	-EB		- 12	-WB	-		NB			88					
HCM Control Deby. s.				22.3		7.1	0.1			2.6			0.00		
	31.7 D			22.0		-	- Vily	-		2.0	-				
HCM LOS	U			-	-W			NS.W			P.		HE ST		
Minor Lane/Major Myrrd		NBL	NBT	NBR	EBLnti	VBLn4	SBL	SBT	SER		SIE				
Capacity (valvh)	20	1161	1 84	20	158	429	1185	17.12	71				E-92	22.00	17
HCM Lane V/C Ratio		0.005	-	-	0 147	0.525	0 151		-						
HCM Control Delay (s)	Teles	8.1	0	200	317	22.3	8.6	0	-		100				
HCM Lane LOS		A	A		D	C	A	A	-	-					
HCM 95th %tile (2(voh)	Fift	0	77		8.5	1	0.5	-			-	PH ST	-		

HCM 6th Signalized Intersection Summary 8 Central Ave & Heartwood Dr

08/21/2024

	1	-	1	1	+	1	1	†	-	1	ļ	1
Movement	EBL	EBI	EBR	WBL	WET	WER	NBL	NBT	NER	SEL	BBT	-88#
Lane Configurations		-			4		K	To		-	- 5	
Traffic Volume (veh/h)	47	23	157	61	19	60	160	719	38	49	725	4
Future Volume (veh/h)	47	23	157	61	19	60	160	719	38	49	725	4
Imitial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A pbT)	1.00		0 98	1.00		1 00	1 00		0.98	1 00		0 9
Parking Bus, Ad	1.00	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	10
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, vehillylin	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	187
Ad Flow Rate veh/h	49	24	72	64	20	47	168	757	32	52	763	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	- 2
Cap Vet/1	133	49	104	173	48	76	211	1090	46	68	940	46
Arrive On Green	0 13	0 13	0 13	0.13	0 13	0 13	0 12	0.61	0.61	0.04	0 53	0 53
Sat Flow, veryh	443	392	824	697	381	603	1781	1779	75	1781	1767	86
Grp Valume(v), vetah	145	0	0	131	0	0	168	0	789	52	0	800
Grp Sat Flow(a) velvfuln	1659	0	0	1681	0	0	1781	0	1855	1781	0	1853
O Serve(g s) s	07	0.0	0.0	0.0	0.0	0.0	5.8	0.0	180	18	0.0	22:
Oycle Q Clear(n.c), s	50	0.0	0.0	4.3	0.0	0.0	5.8	0.0	18.0	1.8	0.0	22.3
Prop In Lane	0 34		0 50	0.49		0 36	1 00		0.04	1 00		0.05
Lane Grp Cap(c), vervh	286	0	0	297	0	0	211	0	1136	68	0	986
V/C Rato(X)	0 51	0 00	0 00	0 44	0 00	0.00	0.79	0 00	0 69	0 77	0.00	081
Avail Cup(c_ii), venin	676	0	0	875	-0	0	298	-0	1385	145	0	1224
HCM Platoon Ratio	1.00	1 00	1 00	1 00	1 00	1 00	1 00	100	1 00	1 00	1 00	1 00
Upstream Filter(I)	1 00	0.00	0.00	1.00	0.00	0.00	1.00	8.00	1,00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26 1	0.0	0.0	258	0.0	0.0	26 9	00	82	29 9	0.0	12 1
Incr Delay (d2), s/wit	2.0	0.0	0.0	1.5	0.0	0.0	94	0.0	1.9	18.4	0.0	4.7
Initial Q Delay(d3) siveh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wie BackOfQ(50%), vehith	21	0.0	0.0	1.9	0.0	0.0	28	0.0	5.6	1.9	0.0	8 4
Uring Movement Delay, siven												
LnGrp Delay(d), s/veh	28.1	0.0	00	27.3	0.0	0.0	36.3	0.0	10.1	46.3	0.0	16.8
LoGo LOS	C	A	A	C	A	A	D	A	В	D	A	B
Approach Vol. wet/h		145	STATE	THE STATE	131		-70	957	all the	CAUSE C	852	-
Approach Delay when		28 1			27 3			147			186	
Approach LOS		C			C			8			В	
Timer - Assigned Plin	1	2		4	15	6	Semi	8	1.0	- 10		FI-S
Phs Duration (G+Y+Rc), s	6.9	43.4		124	11.9	38.3		12.4				
Change Period (Y+Rc), s	45	50		45	4.5	50		45				
Max Green Setting (Gmax), s	51	46 8		24.1	10.5	41.4		24.1				
Max Q Clear Time (g c+11), s	3 8	20 0		7 0	78	243		63				
Green Est Time (p_t), s	0.0	11.7		1.0	0.1	9.0		0.0			98 1	
Intersection Survivary	-110											
HCM 6th Ctrl Delay	100	AVIOR D	18.0	411	5-24		10 m	100	TO THE	ines		1

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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	1	\rightarrow	*	1	4	*	4	1	-	1	1	1
Movement	EBL	EBT	EBR	WEL	WBT	WER	WAL	WES	NER	SBL	SBT	901
Lane Configurations	*	4to		*	14			+\$			44,	
Traffic Volume (veh/h)	24	245	201	63	386	12	266	39	- 88	28	65	111
Future Volume (veh/h)	24	245	201	63	366	12	266	39	88	28	65	11
Initial Q (Qb), veh	0	0	9	. 0	- 0	- 0	0	0	0	0	0	(
Ped-Bike Adi/A pbT)	1 00		0.96	1 00		0.98	1 00		0.97	1 00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adi Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, velvh	25	258	212	66	385	13	280	41	93	29	68	124
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	9.95	0.95	0.95	0.95	0.95	0.05
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	550	431	122	1170	39	0	117	285	0	138	252
Arrive On Green	0.03	0.30	0 30	0.07	0 33	0.33	0.00	0.24	0 24	0.00	0.24	0.24
Sat Flow, velvh	1781	1856	1454	1781	3504	118	0	497	1127	0	588	1072
Grp Volume(v), veh/h	25	247	223	66	195	203	0	0	134	0	0	192
Grp Sat Flow(s), veh/h/ln	1781	1777	1533	1781	1777	1846	0	0	1624	0	0	1659
Q Serve(q s), s	0.5	38	41	1.2	28	28	0.0	0.0	23	0.0	0.0	34
Cycle Q Clear(q c), s	0.5	38	4.1	1.2	2.8	2.8	0.0	0.0	2.3	0.0	0.0	3.4
Prop In Lane	1 00		0.95	1 00		0.06	0.00		0 69	0.00		0.65
Lane Grp Cap(c), vervh	- 55	527	454	122	593	616	0	- 0	382	0	0	391
V/C Ratio(X)	0.45	0.47	0 49	0 54	0.33	0.33	0.00	0.00	0.35	0.00	0.00	0.49
Avail Cap(c a), veh/h	264	947	817	290	974	1011	0	0	890	0	0	909
HCM Platoon Ratio	1 00	1.00	1.00	1 00	1 00	1 00	1.00	1.00	1 00	1 00	1.00	1.00
Upstream Fitter(I)	1.00	1.00	1.00	1.00	1.60	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	16 1	97	98	15.2	8.4	84	0.0	0.0	10.8	0.0	0.0	11.2
Incr Delay (d2), s/veh	5.7	0.6	0.8	3.7	0.3	0.3	0.0	0.0	0.5	0.0	0.0	1.0
inihal Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ife BackOfQ(50%),veh/ln	02	1.1	1.0	0.5	0.7	0.8	0.0	0.0	0.7	0.0	0.0	1.1
Unsig Movement Delay s/veh	and the same											
LinGro Delay(d),s/veh	21.8	10.4	10.6	18.9	8.7	8.7	0.0	0.0	11.3	0.0	0.0	121
LnGrp LOS	C	В	B	В	A	A	Α	A	В	Α	Α	8
Approach Vol. veh/h		495		0-11	464		1170	134	V 40000		192	
Approach Delay, s/veh		11.0			10.2			113			12 1	_
Approach LOS	(FEE	В	No.	127	8			В	911112		В	-
Timer - Assigned Phs	- 1	2	3	4	5	0	7	- 6	_			
Phs Duration (G+Y+Rc), s	0.0	12.4	0.8	14,5	0.0	12.4	5.5	15.B	TOTAL T	1	-	
	45	45	4.5	4.5	45	4.5	45	4.5	ALC: N	ATT CALL	-	
Change Period (Y+Rc), s	50	18.5	5,5		50	18.5	5.0	18.5	-	-	V 100 100	Charles of
Max Green Setting (Gmax), s	0.0	43	3.2	18.0	27	54	2.5	4.8		martin a	NA COLLEGE	
Max Q Clear Time (g_c+l1), s Green Ext Time (p_c), s	0.0	0.6	0.0	2.2	0.0	0.9	0.0	1.8	-	CONT.		1001
	110,0	19.9	0.0	2.4	U,U	0.5	V.M.	1,0		2152	-	
ntersection Summary			10.0		208	100	De-17			NO.		· V
ICM 5th Ohl Delay	-	1000	10.9		- 20	-				1	-	
HCM 6th LOS			В									

	J	-	7	6	+	4	1	†	-	-	ļ	1	
Movement	EBL	EBT	EBR	WEL	WET	WBR	NBL	NBT	NBR	BBL	SBT	SER	
Lane Configurations	7	*	18	3	7+		3	Ţ.		*	1,		
Traffic Volume (vehill)	87	33	194	80	96	16	201	238	62	9	335	123	
Future Volume (veluti)	87	33	194	80	96	16	201	230	62	9	335	123	
Initial Q (Qb), yeh	0	0	0	. 0	0	0	. 0	0	. 0	0	0	. 0	
Fed-Bike Adi(A_pbT)	1.00		0 99	1 00		0 98	1.00	irren e	0.99	100		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	SETHERAN AST
Work Zone On Approac		No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	MERCHANIS.
Adj Flow Rate, veh/h	92	35	204	84	101	17	212	251	65	9	353	129	
Peak Hour Factor	0.95	0 95	0 95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	STREET, N. C.
Percent Heavy Veh. %	2	2	2	112	2	2	2	2	2	2	2	2	
Cop, vervh	118	325	0.17	0.06	265	45	262 0 15	647 0.45	188	21	414	151	
Arrive On Green	0 07	0 17			0.17	0 17			0 45	0.01	0 32	0.32	Access to the last of the last
Sat Flow, vet/h	1781	1870	1576	1781		262	1781		370	1781	1305	477	
Grp Volume(v), vehih	92	35	204	84	0	118	212	0	316	9	0	482	
Grp Sal Flow(s) veh/h/h		1870	1576	1781	C	1818	1781	0	1801	1781	B	1782	
Q Serve(g.s), s	3.1	09	7.4	28	0.0	35	69	0.0	7.0	0.3	0.0	152	The second second
Cycle Q Clearing c), s	3.1	0.0	7,4	2.8	0.0	0 14	100	0.0	7.0	0,3	0.0	15.2	
Prop in Lane		325		1 00	0	309	262	0	0.21 815	100		0.27	
Lane Grp Cap(c), veh/h	0.78	0 11	274 0 75	0.75	0.00	0.38	0.81	0.00	0.39	0.44	0 00	585 0.85	
V/C Ratio(X)	193	560	472	193	0 00	544	370	0 0	973	148	0.00	741	
Avail Cap(c_a), veh/h HCM Platoon Ratio	1.00	1.00	1 00	1.00	1 00	1 00	1 00	100	100	1 00	100	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	Name and Address of the Owner, when the Owner,
Uniform Dalay (d) s/vet		20.9	23.6	27.7	0.0	22.1	248	0.0	10.9	29.5	0.0	19.2	TARREST MANAGEMENT AND ADDRESS OF THE PARTY AN
incr Delay (d2) a/ven		0.1	40	9.7	0.0	0.8	8.7	0.0	03	13.8	8.0	7.5	AL PROPERTY OF THE PARTY OF THE
Initial Q Delay(d3) s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Section of the last of the las
Wie Black Of 0(50%) ver		84	28	1.4	0.0	1.4	3.3	10	2.4	0.2	0.0	6.7	
Unsig, Movement Delay		0.4		1,77	4.5	0.7	3.0	3.0	4.7	4.4	0.0	UII	
LnGrp Delay(d), siveh	38.1	21.1	27.6	37.4	0.0	22.9	33.5	0.0	11.2	43.3	0.0	26.7	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO
LinGip E GR	D	C	C	D	A	C	C	A	В	D	A	C	
Approach Vol. veh/h		331	100	T	202			528		T.	491	E SELLE	Low Marie Land
Approach Delay, sNeh		29.8			29 0			20 2			27 0	-	
Approach LOS	##E	G		=357	0	11850		C	SIL	ESCUTA	C		THE RESERVE OF THE PERSON NAMED IN
The state of the s	_		-	- /4	-	-	- 10		-				
Timer - Accigned Phis	-0.0	2	3	440	13.4	8	V	14.7	-			201	
Phs Duration (G+Y+Rc)		31.7	8.3	14.9		23.6	8.5		100	resit (S	OF THE		No. of Concession, Name of Street, or other Designation, or other
Change Period (Y+Rc).		4.5	4.5	4.5	45	4.5	6.5	45	-		_		
Max Green Setting (Gm		32.5	6.5	18.0	12.5	25.0		18.0		20.5	100		A STATE OF THE STA
Max O Clear Time (g_c		9.0	4.8	9.4	89	17.2	51	55	1		-		
Green Ext Time (p_c), s	U U	1.8	0.0	11.0	02	03/8	0.0	0.4.50			7	CSA	THE PARTY OF THE P
Intersection Summary		WE	MRU		W	1018	100	MAR			28	8 II.	
HCM 6th Ctrl Delay			25.5	100	- 30		97		-	THE S	200		
HCM 6th LOS			C										

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

AM Future 2045 plus Project (w emprovements)
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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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Page 2

Intersection					A11-11-2
Intersection Delay s/veh	9.2				
Intersection LOS	A		A 1 615	A STATE OF THE PERSON NAMED IN	
Approach	2 PH	EB	WB	NB	-60
Entry Lanns		FACTOR	the state of the s	100	Contract to the
Conflicting Cycle Lanes		1	1	1	1
Ad Approach Flow, vetch		331	202	528	491
Demand Flow Rate velvh		338	206	538	501
Vehicles Circulating, Vehih		455	566	139	405
Vehicles Exiting, veh/h		451	111	654	367
Ped Vol Crossing Leg. #/h		2	6	6	4
Ped Cap Adj		1 000	0 999	0.999	0.999
Approach Delay, siveh		9.9	7.8	7.8	11.6
Approach LOS		A	A	A	6
Lane	Left		Left	Left	Left
Designated Moves	LTR		LTR	LTR	LTR
Assumed Moves	LTR		LTR	LTR	LTR
RT Channelized					
Lane Util	1 000		1.000	1.000	1.000
Follow-Up Headway, 1	2 609		2 609	2 609	2 609
Critical Headway, s	4.976		4 976	4.976	4.976
Entry Flow with/h	338		206	538	501
Cap Entry Lane, veh/h	868		775	1197	913
Entry HV Adj Factor	0 980		0 980	0 981	0 980
Flow Entry, vehills	331		202	528	491
Cap Entry, veh/h	850		759	1174	894
V/O Ratio	0.390		0.266	0.450	0.549
Control Delay, s/veh	89		78	7.8	116
LOS	A	35.75.7	A	A	В

							-									
Intersection			100					Sec.				600				8
Intersection Delay s/ve	h 13															_
Intersection LOS	8				-		N. S.			ALE:		i e				
	77	_														
Movement	EBL E	BT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SBR				
Lane Configurations		4.	-	3	7	- ALIGN		4	#	*	Ta.					_
Traffic Vol. veh/h	8	4	8	109	8	74	3	265	136	90	332	2	OF ST	TE S		
Fultre Vol. veh/h	8	4	6	109	8	74	3	265	136	90	332	2				
Peak Hour Factor	0.95 0	95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mymt Flow	8	4	8	115	В	78	3	279	143	95	349	2	6.00	-	T-GE	
Number of Lanes	0	1	0	1	1	0	D	1	1	1	1	Q.				
Approach	EB	_	_	WB	-	_	NB	_	_	SB	- 12	_	-			-
	WH			EB		_	SB			NB			-			
Opposing Approach	Wei 2	-		1	-	-	2	teres	-	NB 2	-			9.00	-	
Opposing Lanes				NB			EB		10.79							
Conflicting Approach Le		_							-	WB	_	_			-	_
Conflicting Laries Laft	2		4	2			- 1		100	2	-		67111			Sil
Conflicting Approach Ri				SB			WB	-		EB	_	_		_		_
Conflicting Lanes Right				2	200		2			1				200		
HCM Control Delay	10.4			112			12 1			14.7						_
HCM LOS	В		911	В	-		В			В	1			O.	-	
Para	TETRE	evis	en en	ere recit	mercus	merus.	SHEAT	Arren .							_	
ene						0%			==				-			
Vol Left %		26	0%	40%				0%								_
Vol Thru, %		194							-	-						
Vol Right, %			0%	20%	0%	10%	0%	99%		16	33				=7	
		1%	100%	40%	0%	90%	0%	1%		150	38				=7	_
	S	1% 1 op	100% Stop	40% 840p	0% 5lop	90% Stop	0% Stop	1% Stop								
Traffic Vol by Lane	8	1% op 68	100% Stop 136	40% 84pp 20	0% Slop 109	90% Stop 82	0% Stop 90	1% Stop 334			*					
Traffic Vol by Lane LT Vol	5	op 68 3	100% Stop 136	40% 84pp 20 8	0% Slop 109 109	90% Stop 82 0	0% Stop 90 90	1% Stop 334 0								
Traffic Vol by Lane LT Vol Through Vol	5	0p 68 3 65	100% Stop 136 0	40% 8/pp 20 8 4	0% Slop 109 109	90% Stop 82 0 8	0% Stop 90 90	1% Stop 334 0 332								IN
Traffic Vol by Lane LT Vol Through Vol RT Vol	2	0p 68 3 65 0	Stop 136 0 0 136	40% 84pp 20 8 4 8	0% Slop 109 109 0	90% Stop 82 0 8	0% Stop 90 90 0	1% Stop 334 0 332 2								IN
Traffic Vol by Lane LT Vol Through Vol RT Vol	2	0p 68 3 65 0	Stop 136 0 136 136	40% 8app 20 8 4 8 71	0% Slop 109 109 0 0	90% Stop 82 0 8 74 86	0% Stop 90 90 0 0	1% Stop 334 0 332 2 352								IN STATE
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate	2	0p 68 3 65 0	100% Stop 136 0 136 143 5	40% 8hpp 20 8 4 8 21 4b	0% Slop 109 109 0	90% Stop 82 0 8 74 86	0% Stop 90 90 0 0 95	1% Stop 334 0 332 2								
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degree of Util (X)	2 2 0	1% 1 op 68 3 65 0 82	100% Stop 136 0 136 143 5	40% 80pp 20 8 4 8 21 4b 0 041	0% Slop 109 109 0 0	90% Stop 82 0 8 74 86	0% Stop 90 90 0 0	1% Stop 334 0 332 2 352 5 0.567						17:2		
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degree of Util (X)	2 2 0	00 00 68 3 65 0 62 5 46 0	100% Stop 136 0 136 143 5	40% 8/pp 20 8 4 8 21 4b 0.041	0% Slop 109 109 0 0 115 5	90% Stop 82 0 8 74 86 5 0 146	0% Stop 90 90 0 0 95	1% Stop 334 0 332 2 352 5 0.567						Val		
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hi	2 2 0 0) 5.8	00 00 68 3 65 0 62 5 46 0	100% Stop 136 0 136 143 5	40% 80pp 20 8 4 8 21 4b 0 041	0% Slop 109 109 0 0 115 5	90% Stop 82 0 8 74 86 5 0 146	0% Stop 90 90 0 0 95 5 0 168	1% Stop 334 0 332 2 352 5 0.567								
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (He Convergence: Y/N	2 2 0 0) 5.8	1% 10p 68 3 65 0 82 5 65 65 65 65	100% Stop 136 0 0 136 143 5 1205 5.15	40% 8/mp 20 8 4 8 71 4b 0.041 7.008	0% Slop 109 109 0 0 115 5 0 231 7.243	90% Stop 82 0 8 74 86 5 0 146 8 094	0% Stop 90 90 0 0 95 5 0 166 6.312	1% Stop 334 0 332 2 352 5 0.567 5.802								
Traffic Vol by Lane LT Vol Through Vol RT. Vol Lane Flow Rate Geometry Grp Degrees of Ubl (X) Departure Headway (He Convergence Y/N Cap	2 2 0 0) 5.8 7	9% 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	100% Stop 136 0 136 143 5 1205 5.15 Yes	40% 8app 20 8 4 8 21 4b 0 041 7,008 Ves	0% Slop 109 109 0 0 115 5 0 231 7 243 Yes	90% Stop 82 0 8 74 86 5 0 146 8 094 Yes	0% Stop 90 90 0 0 95 5 0 168 6.312 Yes	1% Stop 334 0 332 2 352 5 0.567 5.802 Yes								IN S
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hi Convergence Y/N Cap Service Time	5 2 2 0 0 5.8 4 6 3.6	9% 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	100% Stop 136 0 136 143 5 1205 5.15 Yes 656 2 887	40% 8hpp 20 8 4 8 21 4b 0.041 7.008 Yes 509 5.07	0% Slop 109 109 0 0 115 5 0 231 7 243 Yes 496 4 989	90% Stop 82 0 8 74 86 5 0 146 8 094 Yes 588 3.839	0% Stop 90 90 0 95 5 0 166 6.312 Yes 568 4 048	1% Stop 334 0 332 2 352 5 0.567 5,802 Yes 622 3,538								
Traffic Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degrees of Ubl (X) Departure Headway (Hi Convergence Y/N Cap. Service Time HCM Lane V/C Rabo	0 0 5.8 0 5.8 0 0 0 0 0	9% 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	100% Stop 136 0 0 136 143 5 205 5.15 Yes 656 2 887 1205	40% 84pp 20 8 4 8 21 4b 0 041 7,008 Yes 509 5 07 0,041	0% Slop 109 109 0 115 5 0 231 7 243 Yes 486 4 989 0 232	90% Stop 82 0 8 74 86 5 0 146 8 094 Yes 588 3 839 0 146	0% Stop 90 90 0 95 5 0 166 6 312 Yes 568 4 048 0.167	1% Stop 334 0 332 2 352 5 0.567 5.802 Yes 622 3.538 0.566						Vet Vet Eve Eve Eve		
Sign Control Tratific Vol by Lane LT Vol Through Vol RT Vol Lane Flow Rate Geometry Grp Degrees of Util (X) Departure Headway (Hi Canvergence YN Cap ETMP HOW Lane ViC Ratio HCM Control Delay HCM Lane ViC Ratio HCM Control Delay HCM Lone Vol	0 0 5.8 0 5.8 0 0 0 0 0	9% 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	100% Stop 136 0 136 143 5 1205 5.15 Yes 656 2 887	40% 8hpp 20 8 4 8 21 4b 0.041 7.008 Yes 509 5.07	0% Slop 109 109 0 0 115 5 0 231 7 243 Yes 496 4 989	90% Stop 82 0 8 74 86 5 0 146 8 094 Yes 588 3.839	0% Stop 90 90 0 95 5 0 166 6.312 Yes 568 4 048	1% Stop 334 0 332 2 352 5 0.567 5,802 Yes 622 3,538								

HCM 6th Signalized Intersection Summary 5 McKinleyville Ave & Hiller Rd

08/21/2024

	٨	-	7	1	+	1	4	†	-	1	1	1	
Movement	188L	EBT	EBR	WEL	WET	WBR	NEL	NET	NER	SBL	SBT	SER	STREET, STREET
Lane Configurations	K	to		*	7			4	-	7	14		
Traffic Volume (veh/h)	44	47	58	236	44	145	30	225	302	198	239	20	The second
Future Volume (velv/h)	44	47	58	235	44	145	30	225	302	198	239	20	
Initial Q (Qb), veh	0	0	0	0	0	0	- 0	0	0	0	0	0	In the Little Street
Ped-Bike Adi(A_pb7)	1.00		0 99	0.99		0.99	1.00		0.97	1.00		0.98	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	College Colleg
Work Zone On Approac	ch	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	AND DATE OF THE PARTY.
Adj Flow Rate, veton	46	49	61	248	46	153	32	237	318	208	252	21	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	- 2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	443	238	298	525	119	397	115	326	408	501	774	65	
Arrive On Green	0.32	0.32	0.32	0.32	0 32	0 32	0.46	0 46	0.46	0.46	0 46	0 46	
Sat Flow, yeh/h	1179	755	939	1277	378	1257	42	716	895	852	1699	142	THE REAL PROPERTY.
Grp Volume(v), veh/h	46	0	110	248	0	199	587	0	0	208	0	273	
Grp Sat Flow(s) veh/h/l.	n1179	0	1694	1277	0.0	1635	1052	0	0	852	0	1841	100000000000000000000000000000000000000
Q Serve(q s) s	12	0.0	1.9	69	0.0	37	21	0.0	0.0	0.0	0.0	37	
Cycle Q Clear(g_c), s	5.0	0.0	1.9	8.8	0.0	37	11.6	0.0	0.0	10.9	0.0	37	
Prop In Lane	1 00		0.55	1.00		0.77	0.05		0.54	100		0.08	
Lane Grp Cap(c), velvh	443	0	535	525	0	516	849	0	0	501	ā	839	CONTRACTOR OF STREET
V/C Ratio(X)	0.10	0.00	0.21	0.47	0.00	0 39	0.69	0.00	0.00	0.42	0.00	0.33	The same of the sa
Avail Cap(c a), veh/h	856	0	840	756	0	811 -	1410	0	0	786	0	1475	COLUMN TWO IS NOT THE OWNER.
HCM Platoon Ratio	1.00	1.00	1 00	1 00	1.00	1 00	1 00	1.00	1.00	1 00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1,00	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/vel	1124	0.0	9.8	13.1	0.0	10.5	90	0.0	0.0	88	0.0	6.8	mental and a second
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.7	0.0	0.5	1.0	0.0	0.0	0.5	0.0	0.2	CLEANING WEST
Initial Q Delay(d3), sivel	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Arrest - Arrest
%ile BackOfQ(50%),vel		0.0	0.6	1.6	0.0	31	32	0.0	0.0	11	0.0	1.1	SELECTION OF STREET
Unsig Movement Delay	sveh	-						-		-	DINA. ETO		
LnGrp Delay(d) nAreh	12.5	0.0	10.0	13.7	0.0	11.0	10.0	0.0	0.0	9,4	0.0	7.1	E 100538
LnGrp LOS	В	A	В	В	A	В	A	A	A	A	A	Α	
Approach Vol. veh/h	1 80	156	300-97	170	447	-	OF FAIR	587	Vige:	100	481		CONTRACTOR OF THE PARTY OF THE
Approach Delay, s/veh		10.8		-	12.5			10.0	_		81	-	
Approach LOS *	100	В	ETYSA.	3	B	100	7	A	107	1	A	STATE OF	CONTRACTOR AND ADDRESS OF THE
	-	2	Toward St.	4	-	- 8		8	130	-	CHESTON.	-	
Timer - Assigned Phs Phs Duration (G+Y+Rc)		22.4		18.9		22.4		18.9	-	-	arrana a		
Change Period (Y+Rc).		45	1000			45		10.9		#P			
				19,5	00000	31.5	-	19,5	and the same	attribute.	2100-0	115	THE RESERVE OF THE PERSON NAMED IN
Max Green Setting (Gm		31.5 13.6		7.0	-	12.9		19,5 10 B		N. Control			
Max Q Clear Time (g_c		13 6	service.	0.6	-	2.9		1.4		-	-	-	THE RESIDENCE OF THE RE
Green Ext Time (p_c), s	25	43	-	0.6	See E. A.	29	-	1.4			150		
ntersection Summary						- N 14			Man.			1500	
HCM 6th Ctrl Delay	10	COL	10.2	1000	1100		7755	V 2.11		9.1	E P	100	The state of
HCM 6th LOS			8										

AM Future plus Project (w improvements) W-Trans

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Future 2045 plus Project (w improvements)
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Intersection						
Intersection Delay Witch	93					
Intersection LOS	A	-				
Approach	EB	STATE	JWB		NB	SB
Entry Lanes			2	WIND STATE	1	10
Conflicting Circle Lanes	1		1		1	1
Adj Approach Flow, veh/h	156		447		587	481
Demand Flow Rate veh/h	159		456		599	490
Vehicles Circulating, veh/h	722		322		309	333
Veniclas Exting, vet/h	101		586		572	445
Ped Vol Crossing Lng. Ath	4		4		4	2
Ped Cap Au	0.999		0 997	-0	999	1 000
Approach Deby, s/veh	8.5		5.8		11.8	9.9
Approach LOS	A		A		8	A
Lane	Left	tet	Rent	Left	Left	
Designated Moves	LTR	LT	R	LTR	LTR	
Assumed Moves	LTR	LT	R	LTR	LTR	
RT Channelized						
Lane Uti	1.000	0.658	0 342	1.000	1.000	
Follow-Up Headway, 5	2 609	2 535	2 535	2 609	2 609	
Critical Headway, c	4.976	4.544	4 544	4.976	4.976	
Entry Flow, veh/h	159	300	156	599	490	
Cap Entry Lane, weigh	661	1059	1059	1007	983	
Entry HV Adj Factor	0 981	0 980	0.981	0.980	0.982	
Flow Entry, vehills	156	294	153	587	481	
Cap Entry, veh/h	648	1035	1036	987	964	
V/C Ratio	0.241	0.284	0.148	0.595	0.499	
Control Delay s/veh	8.5	6.3	4.8	118	9.9	
LOS	A	A	A	В	A	
95th Wile Ovene veh				4	3	

HCM 6th Signalized Intersection Summary 6. Central Ave & Hiller Rd

6 Central Ave 8	k Hill	er Ro											08/21/20
	1	-	*	1	4-	•	1	1	1	1	1	1	
Movement	EBL	EBT	EBR	WEL	WET	WBR	NBL	NBT	NBR	SEL	EBT	SBR	
Lane Configurations		4	75		4.		W	10		×	*	7	
Traffic Volume (veh/h)	177	- 1	223	2	1	0	239	554	3	3	611	209	
Future Volume (velsh)	177	1	223	7	1	0	239	554	3	3	611	209	
Initial Q (Qb), Van	0	0	0	0	0	- 0	0	0	0	0	0	0	
Ped-Bike Adi(A pbT)	1.00		0 99	1.00		1 00	1 00		1 00	100		0 98	
Parking Bus. Adi	1.00	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.00	1.00	1.00	1.00	AT THE RESERVE OF THE PARTY OF
Work Zone On Approac	h	No			Ma			No		THE R P. LEWIS CO., LANSING	No	-	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	187D	1870	1870	1870	1870	1870	1870	CHICAGO IN
Ad Flow Rate, veh/h	186	1	162	2	1	0	252	583	2	3	643	216	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	STATE OF THE OWNER, OWNER, THE OW
Percent Heavy Veh %	2	2	2	2	7	2	2	2	2	2	2	2	
Cap, velvh	266	- 1	503	5	7	0	302	1059	4	7	754	863	17/20 00 17 175
Аrrive Ол Green	0 15	0 15	0 15	0.00	0.00	0.00	0 17	0.57	0.57	0.00	0.40	0 40	
Sat Flow, which	1772	10	1569	1207	603	0		1863	6	1781	1870	1552	
	187	0	162	3	0	0	252	0	585	3	643	216	
Grp Volume(v) within					0	0		0				1552	
Grp Sat Flow(s), veruit		0	1569	1810			1781		1889	1781	1870		
Q Serve(g_s), n	6.6	0.0	5.2	0.1	0.0	0.0	90	0.0	129	0 1	20 6	48	
Cycle O Clear(g c) s	6.6	0.0	5,2	0.1	0,0	0.0	9.0	0.0	12.9	0.1	20.6	4.8	
Prop In Lane	0 99		1 00	0 67		0.00	1 00	_	0.00	1 00	-	1 00	
Lane Grp Cap(c), veh/h		- 0	503	. 7	0	0	302	0	1063	7	754	863	
V/C Rato(X)	0.70	0 00	0 32	0.41	0.00	0.00	0 84	0 00	0 55	0.42	0 85	0 25	
Avail Cap(c_a), viituti	487	0	698	138	0	0	393	0	1250	135	981	1051	
HCM Platoon Ratio	1.00	1 00	1.00	1.00	1 00	1 00	1 00	1.00	1 00	100	1.00	1.00	
Upstream Filten(I)	1.00	0.00	1 00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), www	26 6	0.0	170	32.7	0.0	0.0	26.4	00	8.9	327	17.9	7 5	
incr Delay (d2); siveh	3.3	0.0	0.4	37.6	0.0	0.0	14.5	0.0	04	33.9	5.8	0.2	
Initial Q Delay(d3), sivel	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
We BackO/Q(50%) ve	100	0.0	1.8	0.1	0.0	0.0	4.5	0.0	4.2	0.1	8.9	2.0	
Unsig Movement Delay	siven	L		-			-						
LnGrp Delay(d),s/veh	29.9	0.0	17.4	65.3	0.0	0.0	38.0	0.0	94	68 6	23.7	7.8	
LinGro LOS	5	A	В	E	A	A	D	A	A	E	C	A	
Approach Vol., wehills	-	349		100	. 3	00.11		837	125014		862	10-11	THE RESERVE OF THE PARTY OF THE
Approach Delay s/veh	-	24.1	_		65 3			180			19 8		The state of the s
Approach LOS	17-12-	C		100	E	шея	II.A	В	250	MAN.	В	-	MINISTER BURN
Tener - Assigned Phis	- 4	4		4	5	- 6	23724	8	-		-	- COL	
Phs Duration (G+Y+Rc)		41.9		144	15.6	31.0		4.8					
		41.5	-	45	45	4.5	-	4.0	-				
Change Period (V+Rc),							-		_	-		-	and the same of th
Max Green Setting (Gir		44.0	158	18.0	14.5	34.5	9 4	5.0	BITTE S				
Max Q Clear Time to c		149		8.6	110	22.6	_	21			-		
Green Ext Time (p_c)_s	0.0	41		1.1	112	4.0		0.0	953				
Intersection Summary				115						-			
HCM 6th Ctrl Delay			19.9	CE T		H	24						Research to the same
HCM 6th LOS			В										

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

AM Future 2045 plus Project (w emprovements)
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	·	7	1	1	+	1
Movement	EBL	EBR	ABL	NBT	SBT	SER
Lane Configurationa	N	#	(a)	4	4	7
Traffic Volume (veh/h)	177	223	239	554	611	209
Future Volume (vervh)	177	223	239	554	611	209
Initial Q (Qb), Vots	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1 00	1.00	1.00			0.98
Parking Bus, Adi	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		1.00	1,00	No	No	1.00
	1670	1870	1870	1870	1870	1870
					643	
Adj Flow Rate, vehilts	165	162	252	583		216
	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, yeh/h	280	520	304	1270	808	918
	0 16	0 16	0 17	0.68	0 43	0 43
Sat Flow, veh/h	1781	1585	1781	1870	1870	1552
Gqs Volume(v), veh/h	186	162	252	583	643	216
Grp Sat Flow(s), veh/h/ln	1781	1585	1781	1879	1870	1552
Q Servery s), n	57	44	79	84	173	39
Cycle Q Clear(q c), s	5.7	4.4	7.9	84	17.3	3.9
	1 00	1 00	100			1.00
Lane Grp Cap(c), vin/h	280	520	304	1270	806	918
	0.66	0.31	0.83	0.46	0.80	0.24
Avail Capic #), veh/h	676	871	415	1584	983	1065
	1.00	1 00	1.00	1.00	1.00	1.00
	1.00	1.00	1.00	1.00	1.00	1.00
Unifixm Delay (d), s/veh		14 5	23.2	4.3	14.3	57
locr Delay (d2), s/veh	3.8	0.5	7.3	0.4	4.7	0.2
Initial Q Delay(d3), sweh		0.0	0.0	0.0	0.0	0.0
Wie BackOt0(50%), web.		0.1	36	19	7.0	18
			- 55	- Metal	7.0	1.0
Unsig Movement Delay			30.8	4:0	19.0	5.9
	26.8	15.1		4.8		
LnGrp LOS	C	8	C	A	В	٨
Approach Vol, veh/h	348	III E	200	835	859	3 prof
	21 4			126	15.7	
Approach LOS	C	10.0		В	В	mes d
Timer - Assigned Phy		2	· Eco	- 4	- 5	15
Pha Duration (G+Y+Rc).		43.9		141	14.4	29.5
Change Period (Y+Rc), s		45		5.0	4.5	4.5
Max Green Setting (Gma				22.0	13.5	30.5
Max Q Clear Time (q_c+		10.4	-	7.7	99	19.3
Green Ext Time (p_c), s	.,, 3	7.5		1.5	0.1	5.7
nlerpoction Stramery				THE REAL PROPERTY.		
-CM 6th Ctrl Delay			15.4			-
			10.4 £1			

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HCM 6th Signalized Intersection Summary 8 Central Ave & Heartwood Dr

08/21/2024

	٠	-	*	1	+	1	1	1	-	1	1	1	
Movement	EBL	EBT	EBR	WBL	WET	WER	NEL	INBT	NOR	SBL	SBT	SER	AND DESCRIPTION OF
Lane Configurations		र्भ	7		4		M	*	74	M	At.		
Traffic Volume (veh/h)	47	23	157	-81	19	60	160	719	38	49	725	42	SUPPRISONS NAMED IN
Future Volume (velvh)	47	23	157	61	19	60	160	719	38	49	725	42	
Initial Q (Qb), veh	0	C	0	- O	0	0	0	9	0	0	0	0	Save Lines
Ped-Bike Adi(A_pbT)	1.00		0.99	1 00		1.00	1 00		0 98	1 00		0.98	
Parking Bus, Adj	1.00	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	SELECTION OF SELEC
Work Zone On Approac	h	No			No	-	10.000	No	THE REAL PROPERTY.		No	0.00	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	35 SELD LINE
Adj Flow Rate, vet/h	49	24	72	64	20	47	168	757	32	52	763	37	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	BEAR WALLEY
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, velvh	263	105	420	188	53	74	217	985	814	74	1538	75	STATE OF THE PARTY
Arrive On Green	0 15	0 15	0 15	0 15	0 15	0 15	0 12	0.53	0.53	0.04	0.45	0.45	THE REAL PROPERTY AND ADDRESS OF THE PARTY.
Sat Flow, yelvit	964	725	1584	541	364	508	1781	1870	1548	1781	3446	167	HARLES HE
Grp Volume(v), veh/h	73	0	72	131	0	0	168	757	32	52	393	407	
Grp Sat Flow(s), veh/h/		0	1584	1412	0	0	1781	1870	1546	1781	1777	1838	WINDS STREET
Q Serve(q s), s	0.0	0.0	1.7	27	0.0	0.0	4.5	15.7	0.5	14	7.7	7.7	A SULPHINA
Cycle Q Clear(q c), s	17	0.0	1.7	4.4	0.0	0.0	4.5	15.7	0.5	1.4	7.7	7.7	ALCOHOLY STATEMENT AND ADDRESS OF THE PARTY
Prop in Lane	0.67	1,60	1 00	0 49	0.0	0.36	1 00	10.1	1 00	1 00	1.4	0.09	And the second s
Lane Grp Cap(c), veh/h		0	420	315	0	0	217	985	814	74	793	819	THE RESERVE AND THE
V/C Rato(X)	0 20	000	0.17	0 42	0 00	0 00	0.77	0.77	0 04	0.70	0.50	0.50	THE PERSON NAMED IN
Avail Cap(c a), veh/h	878	0	982	821	0	0	398	1264	1045	146	950	981	THE OWNER WHEN
HCM Platoon Rabo	1.00	1.00	1.00	1 00	1 00	1 00	1 00	1.00	1.00	1 00	1 00	1 00	
	1.00	0.00	1.00	1.00	0.00	0.00	1,00	1,00	1.00	1.00	1.00	1.00	THE RESERVE OF THE PARTY OF THE
Umform Delay (d) sivel		0.0	13.8	197	0.0	0.0	20 B	9.2	56	23.1	9.5	96	THE REAL PROPERTY.
Incr Delay (d2), s/veh	0.4	0.0	0.3	13	0.0	0.0	5.8	3.3	0.0	11.5	1.0	1.0	Photos and the same of the sam
Initial Q Delay(d3), s/vel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),vet		0.0	0.6	1.4	0.0	0.0	2.0	5.1	0.1	0.8	2.5	25	Maria berner
Unsig Movement Delay			0.0	1.4	U.U	0.0	2,0	0,1	0.1	0.0	2.0	2.0	COLUMN TO SERVICE
LnGrp Delay(d),s/veh		0.0	14.0	210	0.0	0.0	26.6	12.5	5.6	34.7	10.6	10.6	Harmon Market
LnGrp LOS	, 16,9 B	A.U.U	B	C	A	A	20.0 C	12.5 B	D.0	34,7 C	10.0	B B	NAME OF TAXABLE PARTY.
	В	145	D	C	131	А	Ų	957	A	L	852	В	
Approach Vol; veh/h	-						-		1	CE ton	12.1	-	
Approach Delay, s/veh	Debetr	16.5 B	Minor	-	21 0 C			14.8	THE REAL PROPERTY.	TOTAL ST	12.1 B	-	
Approach LOS		-			-	T-AND	THE REAL PROPERTY.		and the last			1	The state of the state of
Timer - Assigned Phs	- 1	2		4	- 5	- 6	21	3	10.			i i	
Phs Duration (G+Y+Rc)		30.7	Jall.	11.6	10.5	26.8		11.6					
Change Period (Y+Rc).		50		45	45	50		4.5					
Max Green Setting (Gm	axJ.e	33.0		24.0	10.9	26.1		24.0					CONTRACTOR OF THE PARTY OF THE
Max Q Clear Time (g_c-		17.7		37	6.5	97		64					
Green Ext Time (p_c), s		8.0	-	0.8	0.2	7.7		0.9	1156	8 10	451,5		SHIVE PESHIO
ntersection Summary	100	Salif		HV2-	The R	1	BAIR	320	180	ANS.		72.4	d and the same
-ICM 6th Ctrl Delay		DOE:	14.2	11500	60 F	-	745	100	1		27018		Wild the Late
HCM 6th LOS			В						-				

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

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Intersection	340			12.66								
Intersection Delay, s/veh	189											
Intersection LOS	C	-87	DAKE I	200	4							
Movement	EBL	EBT	EBR	WBL	WBT	WBR	MBL	NBT	NBR	SEL	SBT	SBF
Lane Configurations	×	44	-	*	410			4			4	
Traffic Vol, whith	95	350	253	42	267	22	190	69	43	11	57	2
Future Vol. veh/h	95	350	253	42	267	22	190	69	43	11	57	2:
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0 95	8.95	0 95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	- 1
Mymt Flow	100	368	266	44	281	23	200	73	45	12	60	24
Number of Lanes	- 1	2	0	1	2	0	0	1	0	0	1	0
Approach	EB			WB			NB		- 5	SB		-
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			1			1		
Conflicting Approach Left	SB			NB			EB			MB		
Conflicting Lanes Left	- 1			- 1			3			- 3		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			- 1			3			3		
HCM Control Delay	192			13 7			25.8			13.2		
HCM LOS	C			В			D	11 1	No.	8		(E)
Lane	CONTRACT.	NBLn1	EBEnt	EBLn2	EBLn3	WBLn1	WBI-n2	WEG e.S	000 ml	-		
Voi Left %	-	63%	100%	0%	0%	100%	0%	0%	12%			
Vol Thru. %		23%	0%	100%	32%	0%	100%	80%	83%	No.	OR SHARE	_
Voi Right, %	200	14%	0%	0%	68%	0%	0%	20%	25%			-
Sign Control		Stop	Stop	Stop	Slop	Stop	Stop	Stop	Sitop			
Traffic Vol by Lane		302	95	233	370	42	178	111	21			-
LT Vol		190	95	0	0	42	0	0	11	AT SEC		1153
Through Vol		69	0	233	117	0	178	69	57			
RT Vol	1000	43	0	2.00	253	0	0	22	23	CHRICK	III II II	
Lane Flow Rate		318	100	246	389	44	187	117	96			
Geometry Grp	and the last	5	5	5	5	5	5	5	5			200
		0 685	0 208	0.476	0.701	0.099	0 391	0 239	0.217		NAME OF TAXABLE PARTY.	
Degree of Util (X)				6.981	6 487	8.026	7.508	7.364	8.138	THE ST	Maria.	2001
		7.753						4.004	W. 1996			
Departure Headway (Hd)		7.753 Yes	7.496 Yes			Yes	Yes	Yes	Yes.			
Departure Headway (Hd) Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes 479	Yes A87	Yes	TOTAL BEA		
Departure Headway (Hd) Convergence, Y/N Cap		Yes 467	Yes 479	Yes 516	Yes 556	446	478	487	441	WHI.		
Departure Headway (14d) Convergence, Y/N Cap Service Time		Yes 467 5 501	Yes 479 5 247	Yes 516 4732	Yes 556 4 238	446 5 785	478 5.267	487 5 123	5 902	7.11		
Departure Headway (Hd) Convergence, Y/N Cap Service Time HCM Lane V/C Ratio		Yes 467 5 501 0.681	Yes 479 5 247 0 209	Yes 516 4732 0.477	Yes 556 4 238 9 7	446 5 785 0.099	478 5.267 0.391	487 5 123 0 24	441 5 902 0 218			
Degree of Uhl (X) Departure Heisdway (Hd) Convergence, YiN Cap Service Time HCM Lane V/C Ratio HCM Control Delay HCM Lane LOS		Yes 467 5 501	Yes 479 5 247	Yes 516 4732	Yes 556 4 238	446 5 785	478 5.267	487 5 123	5 902			

Intersection				U SI									W
Intersection Delay sive	h55.4		-		_				_	-			
Intersection LOS	F			-	100			-	qtim	11111		Si a maria	-
Indiscount Long											_		
Movement	EBL	EBI	EBR	WASI	WET	War	NET	NAT	NBR	SEL	SBT	SSR	
Lane Configurations	7	*	*	*	Î	-	-	- 4	- Tagain	7	*	79	_
	82	43	225	77	26	8	231	409	117	9	277	54	100
Future Vol. veh/h	82	43	225	77	26	- 6	231	409	117	9	277	54	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mymt Flow	86	45	237	81	27	8	243	431	123	9	292	57	-
Number of Lanes	1	1	1	1	1	0	1	401	0	1	202	1	
Approach.	EB		-	W/8	-	_8	483			SB			
	WB	_		EB	-		SB		_	NB			
Opposing Appropria	2	-	-	3			38	-	-	NB 2	-		-
Opposing Lanes		-											-
Conflicting Approach Le			_	NB	65 TH	-	EB	_		W8			
Conflicting Lanes Lift	3	-	-	2			3			2			
Conflicting Approach Ri				SB		-	WB		-	EB	-		
Conflicting Lanes Right	2	-71	7		CAME.	0100	2			3	200		45.00
HCM Control Delay	17.8	-		152			92		_	25 9			
HCM LOS	C		200	Ç		Se a	F			D			
in the second	-	NAME OF TAXABLE	range and		eder (a)	-	and the				-		
Lane									Beie mr				1
Vol Left %		100%		100%	0%	0%			100%	0%	0%		-
Vol Thru, %		0%	78%		100%	0%	0%	76%	0%	100%	0%	100 -	
Vol Right, %		0%	22%	0%		100%	0%	24%	0%	0%	100%		
Sign Control		Stop	Stop	Stop	Stop	Stop	Stop	Stop	Step	Stop	Stop		
Traffic Vol by Lane		231	526	82	43	225	77	34	9	277	54		
LT Vol		231	0	82	0	0	77	0	9	0	0	1 -17	
		0	409	0	43	0	0	26	0	277	0		
Through Vol			117	0	0	225	0	8	0	0	54		
RT Vol	30	0											
RT Vol Lane Flow Rate		243	554	86	45	237	81	36	9	292	57		
RT Vol	e a			86 6		237 8	81		9	292	57	9	II COS
RT Vol Lane Flow Rate	y v	243	554	86	45	237	81	36		6	0 123	130	II G
RT Vol Lane Flow Rate Geometry Grp Degree of Util (X)		243 6	554 6	86 6	45 6	237 8 0 524 8 317	81 6 0 223	36 6	6	6	6		
RT Vol Lane Flow Rate Geometry Grp		243 6 0 559	554 6 1 171	86 6 0 22	45 6 0.109	237 8 0 524	81 6 0 223	36 6 0 092	0 024	0 69	0 123	Se of	
RT Vol Lane Flow Rate Geornetry Grp Degree of Util (X) Departure Headway (Hd		243 6 0 559 8 278	554 6 1 171 7.611	86 6 0.22 9.551	45 6 0 109 9 037	237 8 0 524 8 317	81 6 0 223 10.376	36 6 0 092 9.689	6 0 024 9 383	0 69 8.87	6 0 123 8 15		
RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd Convergence, Y/N)	243 6 0 559 8 278 Yes	554 6 1 171 7.611 Yes	86 6 0.22 9.551 Yes	45 6 0 109 9 037 Yes	237 8 0 524 8.317 Yes	81 6 0 223 10 376 Yes	36 6 0 092 9.689 Yes	0 024 9 383 Yes	0 69 8.87 Yes	6 0 123 8 15 Yes		
RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd Convergence Y/N Gap)	243 6 0 559 8 278 Yes 435	554 6 1 171 7.811 Yes 476 5 36	86 6 0 22 9.551 Yes 378 7 251	45 6 0 109 9 037 Yes 399 6 737	237 6 0 524 8.317 Yes 436	81 0 223 10 376 Yes 349	36 6 0 092 9.689 Yes 372	6 0 024 9 383 Yes 364	0 69 8.87 Yes 411 6 57	6 0 123 8 15 Yes 443		
RT Vol Lane Flow Rate Geometry Grp Degree of Util (X) Departure Headway (Hd Convergence Y/N Gap Service Time)	243 6 0 559 8 278 Yes 435 6 028	554 6 1 171 7.811 Yes 476 5 36	86 6 0 22 9.551 Yes 378 7 251	45 6 0 109 9 037 Yes 399 6 737	237 6 0 524 8 317 Yes 436 6 017	81 0 223 10 376 Yes 349 8 076	36 6 0 092 9.689 Yes 372 7 389	6 0 024 9 383 Yes 364 7 083	0 69 8.87 Yes 411 6 57	6 0 123 8 15 Yes 443 5 85		non-
RT Vol Lane Flow Rate Geometry Grp Degree of Ubl (X) Departure Headway (Hd Convergence Y/N Gap Service Time HCM Lane V/C Ratio)	243 6 0 559 8 278 Yes 435 6 028 0 559	554 6 1 171 7.611 Yes 476 5 36 1 164	86 6 0 22 9.551 Yes 378 7 251 0 228	45 6 0 109 9 037 Yes 399 6 737 0 113	237 6 0 524 8 317 Yes 436 6 017 0.544	81 0 223 10 376 Yes 349 8 076 0 232	36 6 0 092 9.689 Yes 372 7 389 0.097	6 0 024 9 383 Yes 364 7 083 0 023	0 69 8.87 Yes 411 6 57 0.71	6 0 123 8.15 Yes 443 5.85 0 129		

HCM 6th TWSC 3 McKinleyville Ave & Railroad Dr

00	-				
80	VZ.	16	ZΨ	1	9

Lane Configurations Transite Vol. vesh 1 7 Future Vol. vesh 1 2 Confincting Reds., whr 2 Sign Control Step 1 R Chainelized Storage Length Vesh in Median Storage # - Grade, % Peak Hour Factor 95 Heavy Veshods, % 2 Mynth Flow 2 Major/Minor Elmore 105 Stage 1 553 Stage 2 612 Condicated Holly 7, 712 Control Holly 1 7, 712 C	3 3 3 0 5 top 5 1 Nk 0 0 0 95 2 3 3 1 1 1 8 0 1 5 5 3 6 2 7 6 5 5 2 6 5 5 5 5 5 5 2 5 5 5 2 1 0 1 8 3 3 3	392	95 2 193 548 548 612 8 12 8 12 8 12 8 12 8 12 8 12 8 12	1104 548 556 6 52 5.52 5.52	98 98 98 2 2 Stop Nine 95 2 103 548 556	NBL 4 4 7 7 Free 95 2 4 4 112 1 388 1170	NBI 435 435 435 0 Free 0 0 95 2 458		80 80 2 Free 95 2 84 619 4 12 2 218	683 44 355 355 0 Free 0 0 96 2 374	8BR 6 6 8 8 Free None 95 2 6		
Lane Configurations Transite Vol. veh/h 2 Further Vol. veh/h 3 Further V	3 3 3 0 0 5top 5 - No 0 0 0 95 2 3 3 1180 3 553 627 6 552 6 552 5 52 1018 3 3 190 6 514	4 7 Stop kone 95 2 4 362	183 183 1 1 Stop 95 2 193 1104 548 556 8 12 8 12 3 518 8 521	12 12 12 12 10 10 10 10 10 10 10 10 10 10 10 10 10	98 98 2 Stop None 95 2 103	4 4 7 Free 95 2 4 4 12 2218	435 435 435 0 Free 0 0 95 2 458	151 151 1 1 Free None 95 2 159	80 80 2 Free - - - - - - - - - - - - - - - - - -	355 355 0 Free 0 0 95 2 374	6 6 8 Free None		
Lane Configurations Traiffe Vol, veibh 7. Futher Vol, veibh 2. Conflicting Pects, whr. Sign Control Stop 1 R Chairmelized Storage Longli Veih in Median Storage # - Grade, % Peak Hour Factor 95 Heavy Vehnoles, % 2. Mynth Flow 2. Miger/Minor Elmor2 Conflicting Flow All 1185 1 Stage 1 553 Stage 2 612 Colocal Hoky Stg 1 612 Scholar Hoky Stg 1 612 Scholar Hoky Stg 2 612 Colocal Hoky Stg 2 612 Colocal Hoky Stg 3 612 Scholar Hoky Stg 2 612 Stage 1 517 Stage 1 517 Stage 2 490 - Patron Dioched, % Nov Cap 1 Maneurer 117 Mov Cap 2 Maneuver 117 Stage 2 372 - Stage 2 372 - Stage 3 372 - Stage 4 516 - Stage 3 372 - Stage 3 372 - Stage 3 372 - Stage 4 516 - Stage 3 372 - Stage 5 3	3 3 3 0 5 top 5 5 14 5 5 14 5 14 5 14 5 14 5 14 5 14	550p kine 55 2 4 4 392 392 318 :	183 183 1 1 Stop 95 2 193 1104 548 556 8 12 8 12 3 518 8 521	12 12 12 12 10 10 10 10 10 10 10 10 10 10 10 10 10	98 98 2 Stop None 95 2 103	4 4 7 Free 95 2 4 4 12 2218	435 435 435 0 Free 0 0 95 2 458	151 151 1 1 Free None 95 2 159	80 80 2 Free - - - - - - - - - - - - - - - - - -	355 355 0 Free 0 0 95 2 374	6 6 8 Free None		
Traffic Vol. veh/h	3 3 3 3 0 5 top 5 5 14 5 5 14 5 14 5 14 5 14 5 14 5 14	550p kine 55 2 4 4 392 392 318 :	95 2 193 1104 548 558 8 12 3 518 9 521	12 12 0 Stop 0 0 0 95 2 13 1104 548 556 6 52 552 4 018 211	98 2 2 Stop None 95 2 103 548 6 22 3 318	4 7 Free 95 2 4 4 12 2218	435 435 0 Free 0 0 95 2 458	151 1 Free None 95 2 159	80 2 Free 95 2 84 (apx2 619	355 355 0 Free 0 0 95 2 374	6 8 Free None 		
Future Vol. veh/h 2 Conflicting Peds, #h/1 Sign Control Shop 1 Sign Control Shop 1 Sign Control Storage Longth Veh in Median Storage #	0 5top 5 No. 0 0 0 95 2 3 3 553 627 6 52 6 75 5 2 1018 3 3 3 199 6 514	7 5top kine 95 2 4 392	95 2 193 1104 548 556 6 12 8 12 8 12 521	12 0 Stop 0 95 2 13 1104 548 556 6 52 5 52 5 52 4 018 211	2 Stop None 95 2 103 548	7 Free 95 2 4	0 Free 0 0 95 2 458	1 Free None 95 2 159	2 Free - - - - - - - - - - - - - - - - - -	0 Free 0 0 95 2 374	8 Free None 95 2 6		
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R Channelezed Sterage Length Veh in Median Storage # Grade, % Grade No. Peak Hour Factor 95 Heavy Vehicles, % 2 Minjer/Minor 1185 Stage 1 533 Stage 2 612 Chickel Holwy 51 612 5 Chickel Holwy 51 612 5 Chickel Holwy 51 612 6 Chickel Holwy 51 6 Chickel H	0 0 05 2 3 1180 553 627 6.52 5.52 1018 33 190 6.514	95 4 392 392	7 193 1104 548 566 7,12 6 12 8 12 3,518 - 189 521	1104 548 556 6 52 5 52 5 52 4 018 211	95 103 548 6.22 3.318	95 2 4 388	0 0 95 2 458	95 2 159	95 2 84 (apx 2 619	0 0 95 2 374	96 2 6		
Veh in Median Storage, # Grade, % Peak Hour Factor 95 Peak Hour Factor 95 Peak Hour Factor 95 Peak Hour Factor 95 Minjor/Minor 1195 Stage 2 512 Centical Holwy 511 6 12 Cinical Holwy 511 6 12 Cinical Holwy 3519 6 12 Cinical Holwy 519 1 6 12 Cinical H	0 95 2 3 3 1180 4 553 6 57 6 552 6 552 1018 33 190 6 514	95 2 4 392 522	7 193 1104 548 566 7,12 6 12 8 12 3,518 - 189 521	95 2 13 1104 548 556 6 52 5.52 5.52 4 018 211	548 8.22 3.318	95 2 4 388	0 95 2 458	95 2 159	95 2 84 (apx 2 619	0 95 2 374	95 2 6		
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Heavy Vehicles, % 2	2 3 11180 553 627 6.52 5.52 5.52 190 6.51 190 6.51	392 522 318	7 193 1104 548 566 7,12 6 12 8 12 3,518 - 189 521	1104 548 556 6 52 5 52 5 52 4 018 211	548 8.22 3.318	2 4 388 4,12 2,218	0	159	2 84 (ajox2 619	0	0		
Mornt Flow 2 Major/Minor Elmor2 Conflicting Flow All 1185 1 Stage 2 612 Colical Holly 512 612 Colical Holly 512 612 Collical Holly 512 612 Stage 2 480 Palaton blocked, % Mov Cap-I Maneuver 117 Stage 1 510 Stage 2 372 Stage 2 372 Stage 2 372 Stage 2 372	3 1180 1 553 627 6 552 5 52 1018 33 190 6 514	392 392 318	193 1104 548 556 7,12 8 12 8 12 3,518 - 189 521	1104 548 556 6 52 5 52 5 52 4 018 211	548 6.22 3.318	4/12 2/218	0	159	84 (ajox2 619 4 12	0	0		
Majerr/Minor Minor2	1180 3 553 627 6 52 6 5 52 5 52 0 18 3 3 190 6 514	392 5 22 318	1104 548 556 57.12 6.12 8.12 3.518 - 189 521	1104 548 556 6 52 5 52 5 52 4 018 211	548 6.22 3.318	388 4/12 2/218	0	0	619 4 12	0	0		
Conflicting Flow All 1185 1 Stage 1 553 Stage 2 612 Colocal Holdy 7,12 Colocal Holdy 7,12 Colocal Holdy 7,12 Colocal Holdy 351 612 5000 and 9,12 Colocal Holdy 512 612 5000 and 9,12 Colocal Holdy 518 4 500 Cap L Manneuver 171 Stage 2 480 Platon blocked, % 400 Cop Maneuver 177 Wor Cap 2 Maneuver 177 Stage 2 170 Cop Cop Maneuver 177 Stage 3 170 Cop Cop Cop Maneuver 177 Stage 3 170 Cop	553 627 6.52 6 5.52 5.52 0.18 3.3 190 6 514	392 522 318	1104 548 556 7,12 6 12 8 12 3,518 189 521	548 556 6 52 5.52 5.52 4 018 211	548 6 22 3 318	388 4/12 2.218			412				
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Conflicting Flow All 1185 1 Stage 1 553 Stage 2 512 Stage 2 612 Cinteal Holly Stg 1 612 Cinteal Holly Stg 1 612 Cinteal Holly Stg 1 612 Cinteal Holly Stg 2 612 Cinteal Holly	553 627 6.52 6 5.52 5.52 0.18 3.3 190 6 514	392 522 318	1104 548 556 7,12 6 12 8 12 3,518 189 521	548 556 6 52 5.52 5.52 4 018 211	548 6 22 3 318	388 4/12 2.218			412				
Sispe 553	553 627 6.52 6 5.52 5.52 0.18 3.3 190 6 514	318	548 556 7,12 8 12 8 12 3,518 - 189 521	548 556 6 52 5.52 5.52 4 018 211	8 22	4.12			412				
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Criscal Holey 31 1 612 6 Critical Holey Stg 1 612 6 Critical Holey Stg 2 6.12 6 Critical Holey Stg 2 6.12 9 Stg 2 480 Critical Holey Stg 2 480 Critical Holey Stg 2 480 Critical Holey Cap Hanesuver 117 Stg 2 480 Stg 2 372 Stg 2 372 Stg 2 372 Stg 2 372	6.52 6 5.52 5.52 0.18 3.3 190 6 514	318	7,12 8 12 8 12 3,518 - 189 521	6 52 5.52 5.52 4 018 211	3 318	2218		- 1	4 12				
Critical Howy Stig 1 6 12 5 12 12 12 12 12 12 12 12 12 12 12 12 12	5 52 5 52 0 18 3 3 190 6 5 14	318	8 12 8 12 3.518 - 189 521	5.52 5.52 4.018 211	3 318	2218				-	100		
Critical Holwy Stig 2 6, 12 9 Fotowney Holwy 3,516 4 Fotowney Holwy 3,516 4 Fotowney Holwy 3,516 4 Fotowney Holwy 17 Stage 1 517 Stage 2 480 Fotowney 2,516 Stage 2 17 Stage 2 372 Spagnoech EB	5.52 018 3.3 190 6 514		3.518 - 189 521	5.52 4.018 211							NET		
Follow-up Hoboy 3518 4 POI Cap-I Maneuver 171 Stage 1 517 Stage 2 480 Valoton blocked, % Mov Cap-I Maneuver 117 Alov Cap-2 Maneuver 117 Stage 2 372 Stage 2 372 Spgroech EB	190 6 514		3.518 - 189 521	4.018			15	-	2 218			-	
Pol Cap-1 Maneuver 171 Stage 1 517 Stage 2 480 Platton blocked, % 400 Cap-1 Maneuver 117 Mov Cap-2 Maneuver 117 Stage 1 510 Stage 2 372 Approach EB	190 6 514		521	211									
Stage 1 517 Stage 2 490 Stage 2 490 Platton blocked, % Mov Cap 1 Maneuver 117 Mov Cap 2 Maneuver 118 Stage 2 372 Approach EB	514	MES.	521		OCCUPATION NAMED IN			100	501	III SV	miles.		
Stage 2 480		E			14	-			-		-		
Platton blocked, % Mov Cap-1 Maneuver				513		- 12	200	100	1723	1011	- 2	1 000	
Mov Cap-1 Maneuver 117 Mov Cap-2 Maneuver 117 Stage 1 510 Stage 2 372 Approach EB	100		414	u i b	-		-		_	_	_	_	
Mov Cap-2 Maneuver 117 Stage 1 510 Stage 2 372 Sproach EB	166 6	648 -	- 166	185	531	1161	77	4 65	959	100	NI ETN	-	000000
Stage 1 510 stage 2 372 stage 2 372 stage 2 372 stage 3 372 stage	166		- 166	185	001	1101			trun.		-	-	
Stage 2 372 A	453	THE ST	517	513		- 0	100	0671	1000	100	100	N Emile	-
Approach EB	473	BIRCH!	419	452				-	-	-	-	-	_
		and the		HEW TO	100	VENT	in the	-	n.	بالك	10		47.0
			100			NB			SB		-		
1CM Control Delay, 5 22.3		_	WB	-	-	0.1		-	17		055		_
	THE PARTY	. 15	256.4	77		01	101.5	-	1.7		-		-
HCM LOS C	-	-	F		Tenuro		200.01			-			
	-	-			-		3414	-	-			200	
linor LanelNajor Munt N	NBL M	331	MBRE	Bon M	BERT	SEL	SET	SBR	M	-13	100	4 9	-
Capacity (veh/h) 11	1161	160		218	217	959) H						II ČWI
ICM Lane V/C Ratio 0.0	.004	1211	-	0 043	1 421	0 088	15	Y					
	8.1	0	100	27.3		9.1	0	diffe.	11	NAME OF TAXABLE PARTY.	943		
ICM Lane LOS	A	A		C	F	Α	٨						
ICM 95th %tile Q(veh)	0	7.1	18	0.1	17.9	0.3	14	100					

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

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HCM 6th Signalized Intersection Summary 4. Central Ave & Railroad Dr

08/21/2024

	٠	-	>	1	+		1	†	-	1	1	1
Movement	EBL	EBT	EBR	WEL	WBT	WER	NBL	NBT	NBR	SBL	8BT	SSF
Lane Configurations	75	To			4		15	-		7	\$10	
Traffic Volume (veh/h)	111	9	184	31	7	11	173	948	20	6	704	92
Future Volume (veryfs)	111	9	184	31	7	11	173	948	20	6	704	92
incad Q (Qb), veh	0	0	0	0		0	0	0	0	0	0	- 0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.99	1.00		0.98	1.00		0.97
Parking Bun, Acti	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1 00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No	7.00		No	1.00
Adi Sat Flow, veh/h/m	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate veh/h	117	9	148	33	7	1	182	998	18	6	741	94
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	15	250	171	30	3	219	1164	21	11	840	107
Arrive On Green	0.17	0.17	0 17	0.17	0 17	0 17	0 12	0.64	0 64	0.01	0.52	0.52
Sat Flow, withth	1394	88	1443	475	170	16	1781	1830	33	1781	1619	205
Grp Volume(v), veh/h	117	0	157	41	0	0	182	0	1016	- 6	0	835
Drp Sat Flow(s) veh/ti/n	1394	D	1531	E62	0	0	1781	0	1863	1781	0	1825
0 Serve(q_u), s	0.0	0.0	69	15	0.0	0.0	7.3	0.0	319	0.2	0.0	29 7
Cycle Q Clear(p.c), s	5.0	0.0	6.9	8.4	0.0	0.0	7.3	0.0	31.9	0.2	0.0	29 7
Prop In Lane	1 00	0.0	0.94	0 80	W.W	0 02	100	0.0	0 02	1 00	50	0 11
Lane Gro Cap(c) velVh	355	0	265	204	0	0	219	0	1185	11	0	947
V/C Ratio(X)	0.33	0.00	0.59	0 20	0.00	0.00	0.83	0.00	0.86	0.54	0.00	0.88
Avail Cap(c_s), veh/h	500	n	524	422	0	0	219	0	1211	97	0.00	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1 00	1.00	1.00	1 00	1 00	1.00	1 00	1.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d) s/veh	27 1	0.0	27.8	29.5	0.0	0.0	313	0.0	10.7	36.2	0.0	156
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.2	0.0	0.0	22.7	0.0	6.6	34.6	0.0	89
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Back OrQ (50%) weh/h	1.8	0.0	2.5	0.7	0.0	0.0	4.4	0.0	11.8	0.2	0.0	12.5
Unus Movement Detay, s/veh	1,0	9.0	2,0	0,	0.0	0.0	4.4	0.0	11.0	U.L	0,0	12.0
LinGrp Delay(d), sweh	27.3	0.0	28.6	29.6	0.0	0.0	54.0	0.0	17.3	70.8	0.0	24.5
LnGrp LOS	C	A	C	C	A	A	D	A	В	E	A	C
Approach Vol. veh/h		274	- i	_	41		-	1198	-		841	Ť
Approach Delay, s/veh		28 0			29.6			22.9		1000	24.8	
Approach LOS		200	4	red L	Z9.0		23 CN	C C		S.Hee	24 6 C	820
Timer - Assigned Phs		2		4	- 5	6	200	8	-	-		
Phs Duration (O+Y+Rc), s	4.5	51.0		17.7	13.0	42.4		17.7	77 0			
Change Period (Y+Rc), s	4.0	45	-	5.0	4.0	45	9	50	-		_	-
Max Green Setting (Greats), a	4.0	47.5	- 71	25.0	9.0	42.5	-	25.0	-	AL THE	-	DATE:
Max Q Clear Time (g_c+1), s	2.2	33.9		8.9	93	31 7		10.4	A. second	and the last		No. of Lot
Green Ext Time (p_c), s	0.0	92		0.8	0.0	8.3		0.1	-		Charles and	-
	0.0			1,0,0	0.0	0.0		u.,	-	-1/6	a section	_
htimes from Edinominy HCM 6th Ctrl Delay		111-15	24.3	7/17/0						_	-	O.L.
HCM 6th LOS		-	69.7 C					-			-	

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

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-		-	-	-	-	-	

Movement	EBL	EBT	EBR	WEL	WBT	WBR	NBL	NBT	NUR	SBL	TEB	SBR		
Lane Configurations	7	4	*	×	+	7		4			4,			
Traffic Vol, venth	40	80	50	436	120	276	88	288	342	230	276	45		
Future Vol. veh/h	40	80	50	436	120	276	88	288	342	230	276	45		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles %	5	2	2	2	2	2	2	2	2	2	2	2		
Mymt Flow	42	84	53	459	126	291	93	303	360	242	291	47		
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	0		
Approach	EB			.WB			N8			88			200	366
Opposing Approach	WB			EB			SB			MB				
Opposing Lanes	3			3			1			1				
Conflicting Approach Le	ft SB			NB			EB			WB				
Conflicting Lanes Left	1			- 1			3			- 3				
Conflicting Approach Ri	Bildig			SB			WB			EB				
Conflicting Lines Right				- 1			3			3				
HCM Control Delay	17.7			792			380.6			235 7				
HCM LOS	C	-		F			F			THE RESERVE				

Lane	NBLn1	EBLnf	EBLn2	EBLn3	WBLnt	WBLn2	WBLna	SBLnt
Vol Left, %	12%	100%	0%	0%	100%	0%	0%	42%
Vol Thru, %	40%	0%	100%	0%	0%	100%	0%	50%
Vol Right, %	48%	0%	0%	100%	0%	0%	100%	8%
Sign Control	Stop	Slop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	718	40	80	50	436	120	276	551
LT Vol	88	40	0	0	436	0	0	230
Through Vol	288	0	80	0	0	120	0	276
RT Vol	342	0	0	50	0	0	276	45
Lane Flow Rate	756	42	84	53	459	126	291	580
Geometry Grp	5	5	5	5	5	5	- 5	5
Degree of Util (X)	1.774	0 119	0 227	0 132	1 145	0 298	0 628	1 429
Departure Headway (Hd)	9.339	12.991	12.441	11.672	11_103	10.563	9.808	10 289
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	401	278	291	309	330	342	372	360
Service Time	7 039	10 691	10 141	9 372	8 803	8.263	7 508	7 989
HCM Lane V/C Rutto	1.885	0.151	0.289	0.172	1.391	0.368	0.782	1.611
HCM Control Delay	380 6	174	18.8	16.1	128 B	17.7	27.7	235.7
HOM Line LOS	F	C	C	C	F	C	D	F.
HCM 95th-tile Q	43 2	0.4	0.9	0.5	15 1	12	41	26

HCM 6th Signalized Intersection Summary 6 Central Ave & Hiller Rd

08/21/2024

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EBL	EBT	EBR	WBL	WBT	WER	NBL	NOT	NBR	188	SBT	SBR	The section is
3	1			124		*	ţ,	-	*	ţ,		
329	6	393	- 11	6	2	336	900	23	13	762	254	
329	6	393	11	6	2	336	900	23	13	762	754	
0	0	D	0	0	0	0	0	0	0	- 0	0	NUMBER OF STREET
1 00		0.97	1.00		1.00	1 00		0.97	100		0.97	
1 00	1 00	1.00	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.60	1.00	THE RESERVE
h	No		- Line	No	11/835		No			No:		
	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	THE PARTY NAMED IN
336	6	295	11	6	0	343	918	20	13	778	253	
88.0	0.98	0.98	0.98	0.98	0.98		0.98	0.98	0.98	0.98	0.98	ETHIOLISE ME
												Name and Add to the Owner, or other Designation of the Owner, where the Owner, which the Ow
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	men's			0			0			0		
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												September 1
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			nes a tree	- Colonia de la		and the same	-	and the contract of				
												THE PARTY NAMED IN
F		F	D		A	F		В	Е		F	
				45.3								
	3.1			D		120	D			F	100	
10	(2:	100	4	5	8		8	21	Page 1			William St.
96.0	92.0		32.0	26.0	72.0		32.0				J.	
s 45	45		50	45	4.5		50					
ax4,8	85.0		27.0	21.5	67.5		27.0					
10.9	45.2		29 0	235	59 5		27 4					
3.0	16.1	913	0.0	0.0	0.0		0.0	Let		d	1	SYP TYPE
		1	3.0			-	-110					-
THE R	OH HER	81.0	CAN	No.	THE STATE OF	1150-1		1941			SHA	
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HCM 6th LOS

Traffic Operations Study for the Mickinleyville Town Center Project W-Trans

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Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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HCM 6th TWSC 7 McKinleyville Ave & Hayes Rd/Heartwood Dr

Intersection	MALO	-011	572HH											
Int Delay siveh	13.4				-									
Movement	EBS	EBT	EBR	WEL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SER	100	6
Lane Configurations		e‡e			44)			4			44			
Traffic Vol. veh/h	3	3	4	22	4	212	7	501	30	247	506	8	STATE OF THE PARTY	SHIE
Future Vol. veh/h	3	2	- 4	22	4	212	7	501	30	247	506	8		
Conflicting Peds. #fv	2	0	1 12	1		3	2	0	3	3	0	2	1000	Tar. Ort
Sign Control	Stop	Stoo	Stop	Step	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	Vest	100	None	CEPH		None	100		None	do ye	EDF.	None	and the second	TO HOT
Slorage Length	-		or Course		-	110.10	-	-	Services.	-	-	754-74		
Veh in Median Storeg		0	Oliver of	200	0	531		0	1920	-	0			VIII.
Grade, %	N. Carrier	0	-	angree 2	0	Mineral Co.	-	0	-	-	0	-		
Peak Hour Factor	95	95	95	95		95	95	95	85	85	95	95	02.00	
Heavy Vehicles %	2	2	2	2		2	2	2	2	2	2	2	- The second	
Mymt Flow	3	3		23		223	7	527	32	260	533	8	RUMO CORP.	THE REAL PROPERTY.
CHVIIICE IOW		,	-	- 50	-	240	-	ULI	- 04	200	OOL		The same of the	
Major/Minor	Mmar2	al Febru	1	Minori			Vajorit	-	T. A	fajor2	2011	and the		- I
Conflicting Flow All	1733	1635	542	1524	1623	549	543	0	0	552	0	0		
Stage 1	1059	1059	NUMBER OF	560	560	WHEN THE REAL PROPERTY.	17707	5000	OTTO S	10/25	No. 2	100	E FAV	E WINE
Stage 2	674	576	marine.	1064	1063		1000	-	MILITARIO	-	The Party of the P			
Critical Howy	7.12	6.52	6 22	7.12	8.52	8.99	4 12	1000	-5.075	4.12	544		ESSEN	-
Critical Howy Stg ?	6 12	5 52	0.22	0.12	5.52	DIM.REI	ALTERNATION OF THE PERSON	EEDS		7114	esta.		200	
Critical Holwy Stg 2	8.12	5,52	the d	6.12	5.52	-	-	NAMES	SCHOOL	C. COLOR		COLUMN TO SERVICE STATE OF THE PARTY OF THE	Widelia	A SPECIMENT
Follow-up Hdwy	3.518	4.018		3518	4.018	3 318	2 218	-		2.218	-	Mich Adeler		
Pot Cap-1 Maneuver	69	101	540	82	103		1028	NI STATE	and the	1009	100	I ACCUM	SALDON	75 T31162
	271	301	340	513	511	032	JESH.	MARK!	DOC !	INCH	USA	CHILDREN CO.	EVAL	De la
Stage 1 Stage 2	444	502	un seine	270	300	EU I E	me	-		-	W-14	355-NI	UNA 1997	and the same of
	444	502	٠, •	210	300	3112	-			-		-		
Platoon blocked, %	0.7	- 00	date	-	0.4	- man	AHead I	727	and the second	4115.5	THE REAL PROPERTY.	NG/OPEN	-	-
Mov Cap-1 Maneuver	27	63	537	55	64	502	1024	202.80	- 23	1008	- 9	STALL!	100000	
Mov Cap-2 Maneuver	27	63	-	55	64	-	-	· ·	-	-	Total Transport	1 100		-
Stage 1	258	189		508	504	0	-1	1050		44	-	300	120 -211	SCHOOL ST
Stage 2	252	495	-	-165	189	-			-	-			-	
	-	alVe a	SALM	e di		100	Heat.		1	(T)	WIE!	1	distribution of the last of th	-
Approacht	EB			WE	THE R	H PIG	NB	die.	5000	. 58	· Fi	E PLA	-	
HCM Control Delay, s	77.4	3572	Lane.	73.2	1000		0.1	1	4 110	32	200	e selfi	fields.	1000
HCM LOS	F			F			421		-	1000				
		tisa		100		UH-	16			10-	HO	1000		130
dinor Lane/Major Mym	it	NEL	NBT	NBRI	BiniV	iBlin1	BBL	SBT	SER	134		400	السعوال	
Capacity (veh/h)	50111	1024	T Va	1	60	276	1006	- 14	-	Page 1			ERING.	1.00
ICM Lane V/C Rate		0.007		-	0 175		0 258	The state of the s	-	-	-	-		-
-ICM Control Delay (s)	100	8.5	0	WED	77.4	73.2	9.8	0	TO BE	37 9	- 3 1	- 10	TO MAKE	E 1570
HCM Lane LOS		A.A	A	-0.50	F	70.2 F	A.	A	15500	-	-	and the last	and the last	
CM 95th %life Criven	_	0	- ^	_	0.6	8.7	1							

Traffic Operations Study for the Mickinteyville Town Center Project W-Trans

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HCM 6th Signalized Intersection Summary 8: Central Ave & Heartwood Dr

08/21/2024

Lane Configurations 4	8. Central Ave & Hea	Heartwood Dr										08/	21/2024
Lane Configurations 4		1	-	*	1	←	1	1	1	1	1	ļ	1
Traffic Volume (wish) 81	Movement	EBL	EBT	EBR	WEL	WBT	WBR	NEL	NBT	NOR	SBL	SBT	SBR
Future Volume (veh/h) Imitial Q (20), yeth Q 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lane Configurations		4			4		*	fa.		37	ţ,	
Immaid Q (Do), vieh	Traffic Volume (yehrb)	81		214	46		83			56			81
Initial Q (Db), yell		81	20	214	46	16	83						81
Ped-Black Adjók pbT	Initial Q (Qb), Veh	0	0	0	0	0	0	0	0	0	- 0		-0
Parking Bus, Act 1,00		0 99		0 99	1.00		0.96	1 00		0.98	1 00		0.97
Work Zone On Approach		100	1.00	1.00	1 00	1.00	1.00	1 00	1.00	1.00	1.00	1.00	1.00
Adj Sale Flow, with Number 1870 1870 1870 1870 1870 1870 1870 1870		a make a									11.00		
Ade Flave Weith 85		1870		1870	1870		1870	1870		1870	1870		1870
Peak Heley Veh. % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													71
Personal Heavy Veh, % 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													0.95
Can, very h. 121 32 153 116 48 98 214 1161 54 104 1025 Antere Of Gleen				2	2	2							2
Antive Oil Ciseen 0 18 0 18 0 18 0 18 0 18 0 18 0 18 0 1													68
Sal Flow, whith													0.59
Cap Volume(v), verbih 246 8 0 0 115 0 0 204 0 1179 85 0 0 0 0 205 0 0 1170 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1													116
Cap Set Flowled web photon 1514 0													1137
Q Servelg, s) € 10.1 0.0 0.0 0.0 0.0 0.0 147 0.0 777 6.1 0.0 Cpc (Cpc) (Q Cimer(g), c) € 20.5 0.0 9.0 10.4 0.0 0.0 14.7 0.0 777 6.1 0.0 Cpc (Cpc) (Q Cimer(g), c) € 20.5 0.0 9.0 10.4 0.0 0.0 14.7 0.0 777 6.1 0.0 Cpc (Cpc) (Q Cimer(g), c) € 20.5 0.0 0.0 14.7 0.0 777 6.1 0.0 Cpc (Cpc) (Q Cimer(g), c) € 20.5 0.0 0.0 14.7 0.0 0.0 14.7 0.0 177 6.1 0.0 Cpc (Cpc) (Q Cimer(g), c) € 20.5 0.0 0.0 14.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0													1846
Cycle C C C C C C C C C													76.4
Prop In Lawe Lame GP Carp(c), web/h 307 0 0 280 0 0 0 0 241 0 0 1214 104 0 0 VIC Ratio(C) VIC Ratio(C) VIC Ratio(C) 0 80 000 0 000 0 44 0 000 0 00 0 55 0 00 0 97 0 82 0 00 VIC Ratio(C) 100 0 0 0 100 100 100 100 100 100 100 1													764
Lame Gro Cap(c), velvh	Prop le Lane		0.0			0.0			0.0			0,0	0 06
VMC Praison(C) 0.80 0.00 1.00									1000			0	1095
Avail Capic; al, veh6h 321 0 0 277 0 0 0 214 3 1214 104 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													1 04
HCM Plation Rabo 100 100 100 100 100 100 100 100 100 10													1095
Update Fisher 1.00													1.00
Linitzen Delay (d.) stveh 13.8 0.0 0.0 474 0.0 0.0 563 0.0 211 0.0 0.0 0.0 long total (22) stveh 13.8 0.0 0.0 1.7 0.0 0.0 0.0 478 0.0 19.4 38.4 0.0 0.0 long total (22) stveh 13.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0													
Inter Delay (22) Switch 13.8 0.0 0.0 1.7 0.0 0.0 47.8 0.0 19.4 88.4 0.0 10.0 10.0 10.0 10.0 10.0 0.0													1.00
Initiat District Continue													26 2
White Backol (CigCos) synthm 9,0 0,0													37.8
Linsig Movement Delay skeh Linsig Delay(e), skeh Linsig LOS E A A D A A F A D F A A A A A B A B F A D F A A A A A B A B A B A B A B A B B A B B A B													0.0
Lincon Delay Control			8.0	0.0	3.5	0.0	0.0	9.4	9.0	36.5	3.8	11.0	42.3
LnGep LOS E A A D A A F A D F A Approach Val within 246 1165 1383 11224 Approach LOS F D U U E Singer Approach LOS F D U U U E Singer Approach LOS F D U U U E Singer Approach LOS F D U U U U U U U U U U U U U U U U U U					(0.1			72.77	200	*********			
Ageroach Vol. verVh													64.0
Agorrach Delay, Sveh		E		А	D		A	_ F		D	F		F
Approach LOS		28.20		Table 1						OF THE P			March
1		_					_						-
Phis Durellon (G-Y-RC), s 12.0 69.4 27.4 20.0 81.4 27.5 Change Period (Y-RC), s 4.5 50 4.5 45 50 4.5 Max Creen Selfing (Ginza), s 7.5 84.4 24.1 15.5 76.4 24.1 Max C Clear Time (g. c-11), s 8.1 79.7 22.5 16.7 78.4 12.4 Green Exit Time (g. c), s 6.0 4.2 0.3 0.3 0.0 0.6 Indicated the Control Summary I-CM 60 Cpl Cetary 57.9	Approach LOS		Ē			D		100	D			E	100
Change Period (Y-Rc), s 4.5 5.0 4.5 45 5.0 4.5 Mix Green Setting (Grinar), s 7.5 64.4 24.1 16.5 78.4 24.1 Mix Of Clien Time (p. c+1), s 8.1 79.7 22.5 16.7 78.4 12.4 Green Exit Time (p. c), s 6.0 4.2 0.3 0.3 0.0 0.5 Indicated in Strimary I-CM 6th Cipl Clienty 57.9	Timer - Adolgnod Phy	1	2	1513	4	5	6		5	1154	N 10	12000	
Change Period (Y-Rc), s 4.5 5.0 4.5 45 5.0 4.5 Mikks Green Setting (Green), s 7.5 84.4 24.1 15.5 78.4 24.1 Miks Cleen Time (g. c+11), s 8.1 79.7 22.5 19.7 78.4 12.4 Green Exit Time (g. c), s 0.0 4.2 0.3 0.3 0.0 0.5 Indexection Summary I-CM 6th Cipl Cetary 57.9	Phs Duretion (G+Y+Rc), s	12.0	89.4	1111111	27.4	20 D	81.4		27.4	-57		-	No.
Max Creen Setting (Ginse), s 7.5 84.4 24.1 15.5 78.4 24.1 Max O Clear Time (g, ≤+11), s 8 1 797 22.5 167 78.4 12.4 Green Ext Time (g, ≤+11), s 8.0 42 0.3 0.3 0.0 0.6 Maximized Statistics (Green Ext Time (g, ≤), s 8.0 42 0.3 0.3 0.0 0.6 Maximized													
Max Q Clear Time (g. c+11), s 8 1 797 22.5 167 78.4 12.4 Green Ext Time (g. c), s 0.0 42 0.3 0.0 0.6 Makelentoni Surimary HCM 6th Clipt Oblety 57.9		7.5	84.4	1200				70.00		THE R	1000		MPH.
Green Eul Trais (p. cl.) s 0.0 42 0.3 0.3 0.0 0.6 interior in Summery in CM did up 57.9 in CM did up 5				-									and the last
HCMI 6th Cliri Delay 57.0				SUL						Sec.	ii da	100	WE
	Intersection Summary		Marie C	0.00		9.00	18.0				Name and	and the same	
	HCM 6th Ctrl Delay	P 12	8	57.9	Cartain?	C 10.01	10 (10)	TUNE.	N-677	LOUIS .		1910	THE P
	HCM 6th LOS			E									

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

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1. McKinleyville Ave & Murray Rd

08/21/2024

	1	\rightarrow	7	1	4	1	1	1	1	1	1	1
Movement	EBL	EBT	EBR	WHL	WBT	WBR	NBL	NBT	NER	SBL	981	886
Lane Configurations	*	+10		*	* †*			44			4	
Traffic Volume (verum)	95	350	263	42	267	22	190	69	43	11	57	23
Fulure Volume (veh/h)	95	350	253	42	267	22	190	69	43	-11	57	23
Initial Q (Qb), veti	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A pbT)	100		0.95	100		0.97	1.00		0.98	1 00		0.97
Parking Bus, Adi	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adi Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adi Flow Rate, veh/h	100	368	266	44	281	23	200	73	45	12	60	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, vehih	163	656	465	90	982	80	0	207	128	0	243	97
Arrive On Green	0.09	0.34	0.34	0.05	0.30	0.30	0.00	Q 19	0 19	0.00	0 19	0.19
Sat Flow, yeh/h	1781	1944	1378	17B1	3319	270	0	1072	681	0	1259	504
Grp Volume(v); vehitr	100	336	298	44	149	155	0	0	118	0	0	84
Grp Sat Flow(s), vehi/h/la	1781	1777	1546	1781	1777	1812	0	0	1733	0 0	0	1763
G Serve(g, s) s	17	50	51	0.8	21	21	0.0	0.0	19	0.0	0.0	13
Dycle Q Clearfe of a	1.7	5.0	5.1	0.8	2.1	2.1	0.0	0.0	1.9	0.0	0.0	1.3
Prop in Lane	1.00	- 0.0	0.89	100	-	0 15	0.00		0.38	0.00	0.0	0.29
Lane Grp Cap(c), veh/h	163	599	521	90	525	536	0	0	335	0	0	341
V/C Rato(X)	0.61	0.56	0.57	0.49	0 28	0.29	0.00	0.00	0.35	0.00	0.00	0.25
Aveil Cap(c_a), veh/h	304	1020	887	276	993	1012	0	0	995	0	0	1012
HCM Platoon Ratio	1.00	1.00	1.00	100	1 00	1 00	1 00	1.00	1.00	1.00	1.00	1.00
Upstrum Filter(I)	1 00	1.00	100	100	1.00	1.00	0 00	0.00	1 00	0.00	00 00	1.00
Uniform Delay (d), s/veh	14 1	8.7	8.8	14.9	8.7	8.7	0.0	0.0	113	0.0	0.0	11.0
Incr Delay (d2), s/veh	3.7	8.0	1.0	4.1	0.3	0.3	0.0	0.0	0.6	0.0	0.0	04
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back O/O(50%), veh/in	0.7	1.3	1.2	0.3	0.6	0.6	0.0	0.0	0.6	0.0	0.0	0.4
Unsig Movement Delay s/veh		1,4	1.2	0.5	0.0	0.0	0.0	u.u	0.0	0.0	0.0	0.4
LnGrp Delay(d) sWeh	17.8	9.5	9.8	19.0	9.0	9.0	0.0	0.0	11.9	0.0	0.0	11.4
LnGrp LOS	8	A.S	Α.	В	A	A	A	A	В	A	A	B
Approach Vol. wh/h	-	734	-	-	348			118	-	-	84	
Approach Delay s/ven		10 8		_	103	U = 0 = 0	LUAGE	119	-		114	-
Approach LOS		В	THE ST	-	B	-	STORY OF	0	-	-	B	
										PARTY.	В	
Timer - Assigned Pres	- 1	2	3	4	б	-6	7	8	4000	HAMAI		
Phs Duration (G+Y+Rc), s	0.0	10.7	5.1	15.4	0.0	10 7	7.5	14.0				
Change Period (Y+Rc), s	4.5	4.5	45	45	45	45	45	4.5				
Max Green Setting (Gmax), s	5.0	18.5	5.0	18.5	5.0	18.5	5.5	18.0		-		
Max Q Clear Time (g_c+11), s	0.0	39	2.8	7 1	00	33	37	4.1				
Grown Ext Tirms (p_c), s	0.0	0.5	0.0	3.0	0.0	0.3	0.0	1.4			A RES	
Intersection Summary						-3						100
HCM 6th Ctrl Delay	THE		10.8		100	NUN	DOME		SIPH	ACH	447	100
HCM 6th LOS			В									

Traffic Operations Study for the Mickinleyville Town Center Project

HCM 6th Signalized Intersection Summary

2. Central Ave & Murray Rd

PM Future 2045 plus Project (w improvements) Page 2

08/21/2024

Traffic Operations Study for the MicKinleyville Town Center Project W-Trans

PM Future 2045 plus Project (w improvements)

HCM 6th AWSC 3: McKinleyville Ave & Railroad Dr

08/21/2024

Intersection	100		17			58	- 10		1117		P=1		SERVI		
Intersection Delay, s/ve	h21 B														
Intersection LOS	C			ETHE			STORY.	197					ALC: N	101	-55
Movement	EBL	ERI	EBR	WEL	WBT	WBR	NBL	NBT	MER	USBL	SBT	SER		413	10
Lane Configurations		4		*	14			स	7	R	10	32.004			
Traffic Vol, vehih	2	3	4	183		98	- 4	435	151	80	355	6	HE		
Future Vol., veh/h	2	3	4	183	12	98	4	435	151	80	355	Ē			
Peak Hour Factor	0.95	0.95	0.95	0.95	0,95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		The.	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2			
Mymt Flow	2	3	4	193	13	103	4	458	159	84	374	8			
Number of Lanes	0	1	0	- 1	1	0	0	-1	1	1	1	0			
Approach	EB	-		WB		Steel of	NB	A SECTION	ENT	98		1017	200	-50	1
Opposing Approach	WB			EB			SB			NB					
Opposing Lanes	2	211		- 1	200	4	2		-	2		LACT !	100	180	100
Conflicting Approach Le				NB		-	EB			WB					
Conflicting Lanes Left	2	EN.	5809	2	-100	West of the last		2022		2	MIT I	WE ST	-	LINE	750
Conflicting Approach Ri	ghN8			SB			WB			EB					-
Conflicting Lanes Right		0.72	3614	2	HIS	1	2	HIS		- 1	E Ve		-137	SEA.	-
HCM Control Delay	11.4			144			26.5			20.7					
HCM LOS	В	ENT L		В	No.	MUES	D	Pell	300	C		DES-11	WINS.	102	8673
Lacy	1	Blat	MBLm2	EBLAT	AHEMI	NBL12	SBLnt	BBLn2					1150	AVA:	Alexander of the
Vol Left, %		1%	0%	22%	100%	0%	100%	0%							
Vol Thru, %		99%	0%	33%	0%	11%	0%	98%				200	1000		
Vol Right, %		0%	100%	44%	0%	88%	0%	2%							
Sign Control		Stop	Stop	Stop	Stop	Stop	Stop	Stop							ALC:
Traffic Vol by Lane		439	151	9	183	110	80	361							
LT.Vel	2059	4	3	2	183	0	83	0					MGE S		NEW YEAR
Through Vol		435	0	3	0	12	0	355							
RT Vol.		0	151	4	0	96	0	6					THE PARTY		200
Lane Flow Rate		462	159	9	193	116	84	380				-			
Geometry Grp	C772	5	5	40	5	- 5	5	5	1120	William.	-		1000		
Degree of Util (X)		0 82	0.25	0 022	0418	0.215	0 165	0 691							
Departure Headway (Ho	5)	8.387	5.67	8.187	7.82	8.671	7.065	6.544				NEW T	TID.	EQ.E	MAIN
Convergence Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes					-		
Cap was a series	(Title	564	629	440	458	535	504	547	C SV	NEW P		OLD B	-	200	
Service Time	-	4 165	3.447	6 187	5 604		4.849	4.327							
HCM Lane V/C Ratio	HIGH	0.819	0.253	0.02	0.421	0.217	0 167	0 895	PALI	BOOK		The state of	N/SHI		685
-ICM Control Delay		32 1	10 4	11.4	16.2	113	113	22.8	-		-	-			
-ICM Lane LOS		D	В	В	C	В	8	C	JES.	Fille	-	PERM	ENZIE	-	IIES
HCM 95th tile O		82	1	0.1	2	D.B.	0.6	5.3	-						-

Intersection				E H. S. H.
Intersection Delay, s/veh	83			
Intersection LOS	A		LEUGE LEVEL	
Approach	EB	WB	NB	88
Entry Lunes	100 100	to a large of the large	1	
Conflicting Circle Lanes	1	-1	1	1
Adj Approach Flow, veh/h	9	300	621	464
Demand Flow Rate_veh/h	9	315	633	473
Vehicles Circulating, veh/h	664	473	91	214
Vehicles Exiting, veh/h	23	251	582	574
Ped Vol Crossing Leg. #/h	8	2	7	8
Ped Cop Adj	0 999	1 000	U 999	0.999
Approach Delay, siven	5.3	H.7	8.4	7.9
Approach LOS	A	A	A	A
Lane	Let	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LIR
RT Channelized				
Lane US	1,000	1.000	1.000	1.000
Follow-Up Headway, s	2 609	2 609	2 609	2 609
Ortical Neadway, s	4.976	4.976	4 976	4.976
Entry Flow, veh/h	9	315	633	473
Cap Entry Lane, velote	701	852	1258	1109
Entry HV Adj Factor	0 993	0 980	0 981	0 980
Flow Entry, vehill	9	309	621	464
Cap Entry, value	696	835	1232	1086
V/C Rate	0.013	0.370	0 504	0.427
Control Delay s/veh	53	8.7	8.4	79
108	A	A	A	A
95th %ble Queue veh	0	2	3	2

HCM 6th Signalized Intersection Summary 5 McKinleyville Ave & Hiller Rd

08/21/2024

	,	->	+	1	-	•	1	1	1	1	1	1	
Movement	EBL	EBT	EBR	WEL	WBT	WBR	NEL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	K	1		7	74			150		- 7	1		
Traffic Votame (veh/h)	40	80	50	436	120	276	88	288	342	230	276	45	
Future Volume (veh/h)	40	80	50	436	120	276	88	288	342	230	276	45	
tritial Q (Qb), with	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Ad(A_pbT)	1 00		0 97	1 00		0 97	100		0.97	1 00		0 97	
Parking Bus. Adi	1.00	1.00	100	1.00	1.00	1.00	100	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approac	h	No			No			No			No		
Adi Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	
Adj Flow Rate veh/h	42	84	53	459	126	291	93	303	360	242	291	47	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	THE RESERVE
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, weith	270	406	256	516	189	437	129	330	365	268	762	123	- Control of the Cont
Arrive On Green	0.38	0.38	0.38	0 38	0.38	0.38	0 49	0.49	0 49	0.49	0.49	0 49	
Sat Flow, web/b	969	1058	867	1247	492	1136	146	678	749	772	1564	253	THE REAL PROPERTY.
Grp Volume(v) veh/h	42	0	137	459	0	417	756	0	0	242	0	338	
Grp Sat Flow(s), vels/Mr		0	1725	1247	0	1628	1573	0	0	772	0	1817	THE RESERVE OF THE PARTY.
Q Serveto s), s	26	0.0	37	23 2	0.0	148	25 0	0.0	0.0	0.9	0.0	82	
Cycle Q Clearlo c), s		0.0	37	26.9	0.0	14.8	33 2	0.0	0.0	34.1	0.0	82	THE RESERVE AND ADDRESS OF THE PARTY OF THE
Prop in Lane	1 00	4.0	0.39	100	4.0	0.70	0.12		0.48	1 00	0.0	0 14	the second second second second
Lane Grp Cap(c), veh/h		0	663	516	0	626	824	0	0	268	0	885	THE RESERVE AND ADDRESS.
V/C Ratio(X)	0 16	0.00	0.21	0.89	0.00	0 67	0 92	0.00	0.00	0.90	0.00	0.38	THE RESERVE OF THE PARTY OF THE
Avail Cap(c a), veh/h	270	0	663	516	0	626	824	0.00	0	268	0.00	885	THE RESIDENCE
HCM Platpon Raths	1 00	1 00	1.00	1 00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0 00	1 00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1 00	THE RESIDENCE OF THE PARTY OF T
Uniform Delay (d), sivet		0.0	144	246	0.0	17.8	17.6	0.0	0.0	23 7	0.0	113	
incr Delay (d2), stylin	03	0.0	0.2	17.3	-0.0	2.7	15.0	0.0	0.0	30.9	0.0	03	STREET, SQUARE, SQUARE,
Inibal Q Delay(d3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Wile BackO/O(50'%), vel		0.0	14	9.7	0.0	54	14.1	0.0	0.0	6.4	0.0	3.1	and the same of
Unsig Movement Delay			14	9,5	0,4	- 0.4	14.1	0.0	W.W.	9,7	0.0	4.1	
LnGrp Detay(d) sAveh		0.0	14.6	41.9	0.0	20.5	32.6	0.0	0.0	54.6	6.0	11.6	Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, whic
LnGm LCS	C	A	B	0	A	C	C	A	A	0	A	B	
Appropriate Vol. wetute	-	179	-		876	TO SEC.	-	756		-	580		
Approach Delay, s/veh	-	17.1	2010		31.7			32 6		i i i i	29.5		CONTRACTOR OF THE PARTY OF THE
Approach LOS	No.	8	-	-	C	-		C C		-	San	- TV	-
100	of Feet	-			- 0	4-151-	the s		-		-	nel l	
Timer - Assigned Fits	-	2		4	_	8	H-2	8					
Phs Duration (G+Y+Rc)		38 6		314		38.6		31.4					- With the Park
Change Period (Y+Rc).		45		45	-	45		45				-	-
Max Green Selling (Gm		34 1		26.9		34 1		26 9		100		400	
Max Q Clear Time (g_c		35 2	-	195		36 1		289			-		
Green Ext Time (p_c), s		0.0		0.5		0.0	200	0.0		11/60		174	Maria Carlo
ntersection Summary	417		100		PIL	Ŧ.		2.0					
HCM fith Chri Delay			30,4										Party
HCM 6th LOS			C										

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HCM 6th Signalized Intersection Summary 60 Central Ave & Hiller Rd

08/21/2024

	۶	-	7	1	4	4	4	1	-	1	Ţ	1	
Movement	EBL	EBT	EBR	Wal	WBT	WER	NBL	NBT	NER	-6DL	SET	SER	STATE OF THE PARTY OF
Lane Configurations		4	#		4		*	14	_	75	*	7	
Traffic Volume (vek/h)	329	6	303	11	6	2	336	600	23	13	762	254	PARTICIPATION OF THE PARTY OF T
Future Volume (velvh)	329	6	393	11	6	2	336	900	23	13	762	254	THE REAL PROPERTY.
Initial Q (Qb), veh	0	0	0	0	0	0	D	- 0	0	0	0	0	CONTRACTOR IN CONTRACTOR
Ped-Bike Adi(A pbT)	1 00	-	0.99	1.00	-	0.97	1 00		100	1.00	-	0.98	OSCIPLIANCE
Parking Bus. Adi	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	100	1.00	1.00	1.00	AND DESCRIPTION OF THE PERSON NAMED IN COLUMN 1
Work Zone On Approach		No	1,00	1,00	No	1.00	1.00	No	665	1 44	No	1.00	
	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	CHARLES IN COLUMN
Adj Flow Rate, veh/h	336	6	331	11	6	2	343	918	22	13	778	255	No. of Concession, Name of Street, or other Persons, Name of Street, or ot
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	and of the last of
Cap, veh/h	345	8	623	20	11	4	351	11.10	27	25	800	977	CHARLES NO SECURE
Arrive On Green	0 20	0.20	0.20	0.02	D 02	0.02	0 20	0.61	061	0.01	0.43	0.43	ATTENDED TO A
	1752	31		1029	561	187	1781	1819	44	1781	1870	1552	CONTRACTOR MATERIAL
Grp Volume(v), veh/h	342	0	331	19	0	0	343	0	940	13	778	255	THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IN COLUMN TO THE PERSON NAMED IN COLUMN TWO IN COL
Grp Sat Flow(s), veh/h/in		0	1573	1777	0	0	1781	0	1862	1781	1870	1552	THE PERSON NAMED IN COLUMN
Q Serve(q. s), s	21.7	0.0	18.4	1.2	0.0	0.0	21 8	410	45.3	0.8	46.5	8.4	DESCRIPTION OF
	21.7	0.0		1.2	0.0	0.0	21.8	0.0	45.3	0.8	45.5	84	A SATE OF THE PERSON NAMED IN
	0 98	0.0	1 00	0.58	0.0	0.0	1 00	U.U	0 02	1.00	45.5	1.00	ACCORPANY MINERAL
Prop in Lane		D	523	35	0	0.11	351	-	1137	26	800		
Lane Grp Cap(c), velvh	0.97	0.00			0.00	0.00	0.98	0.00	0.83	0 49		977	
V/C Rabo(X)	352		0 53 623	0 54	0.00	0.00	351	0.00	1137	78	0 97	979	A CONTRACTOR OF THE PARTY OF TH
Avail Cap(c_a), veh/h	1 00	1 00			1.00			1.00			803		
HCM Platoon Ratio			1 00	1 00		1.00	1 00		1 00	1 00	1 00	1 00	- Contract
	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	STATE OF THE PARTY
Uniform Delay (d), s/veh		0.0	26 5	554	0.0	0.0	45.5	0.0	17.5	55.8	32 0	96	and the same of th
incr Delay (d2), s/veh		0.0	0.9	12.2	0.0	0.0	41.5	0,0	5.2	13.5	24.9	01	
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	***
%le BackOfQ[50%],veh		0.0	7.1	0.7	0.0	0.0	13.5	0.0	19.2	0,5	25.6	4.6	the second second
Unsig. Movement Detay													
	95.0	0.0	27.4	67.6	0.0	0.0	87.0	0.0	22.7	69.3	56.9	9.7	MINE STATE
LnGrp LOS	F	A	C	E	Α	A	F	A	С	E	E	A	
Approach Vol, veh/h		673			19	44	-00	1283	97 3		1045	Men	
Approach Delay, s/veh		57.2			67.6			39 9			45.6		
Approach LOS	HE	E	144	ans	E	200		D	U	Total !	D		HE SHIP SHIP
Timer - Assigned Phs	1	2	Ŧ.	4	5	8		8	0115	TELY			THE RESERVE OF THE PARTY OF THE
Phs Duration (G+Y+Rc);	56.2	74.1		27.0	27 0	53.3		6.8					DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAME
Change Period (Y+Rc), s		45		4.5	45	45		45					
Max Green Setting (Gine	5.8	86.5		22.5	22.5	49.0		18.0					
Max Q Clear Time (g_c+	12,8	473		23.7	23.8	48.5		32					
Green Ext Time (p_c), s	0.0	7.2		0.0	0.0	0.3		0.0			de Chi	SUF.	
intersection Summary	i p					-		- 6	-		48	4 7	
-ICM 6th Ctrl Delay	17750	Carlo	45.9	1	STATE OF	We -	COL	45	1075	2017	1177	OHE IN	
HCM 6th LOS			D					-					

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PM Future 2045 plus Project (w emprovements)
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	,	>	4	1	1	1
Movement	EBL	EBR	NEL	NET	SBT	SBR
Lane Configurations	1	*	7	4	+	- 74
Traffic Volume (veh/h)	329	393	336	900	762	254
Future Volume (vet/th)	129	393	336	900	762	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1 00	1 00	1 00			0 97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approac	h No			No	No	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	336	295	343	918	778	253
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh %	2	2	2	2	2	2
Cap, with/h	376	866	372	1295	818	1004
Arrive On Green	0.21	0 21	0.21	0.69	0.44	0 44
Sat Flow, veh/h	1781	1585	1781	1870	1870	1531
Grp Volume(v), veh/h	336	295	343	918	778	253
Grp Sat Flow(s), veh/h/lr	1781	1585	1781	1870	1870	1531
Q Serve(g s) s	18 0	130	18.5	29 1	39 3	6.8
Cycle Q Clear(g c), s	18.0	13.0	18.5	29.1	39.3	6.8
Prop in Lane	1 00	1 00	1 00			100
Lane Grp Cap(c), veh/h		666	372	1295	818	1004
V/C Rato(X)	0 89	0 44	0.92	071	0.95	0.25
Avail Capro a), veh/h	399	686	372	1305	829	1013
HCM Platoon Ratio	1 00	1 00	1.00	1 00	1.00	1.00
Joseann Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/vet		20.3	38 1	9.1	26.6	73
incr Delay (d2), s/veh	21.6	07	27.5	2.1	204	0.2
Initial Q Delay(d3), s/veh		0.0	0.0	DO	00	0.0
NGIe BackOfQ(50%), veh		12.8	107	10.3	210	38
Unsig Movement Delay			10.1	10.0	21.0	0.0
LnGrp Delay(d),s/veh	59.3	21.0	65.6	112	47.0	7.5
LnGro LOS	50.5 E	C C	E	В	D.	A
Approach Vol., within	631		_	1261	1031	^
Approach Delay siveh	41.4	-91	-	26 0	37 3	
Approach Delay Sven	41 4 D	_	-	26 U	3/ 3 D	_
Action (10)	- 11		-	Ų	υ	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc)		72.4		25.7	25.0	47.4
Change Period (Y+Rc)	s	45		50	45	45
Max Green Setting (Gm	ax), s	68.5		22.0	20.5	43.5
Max Q Clear Time (g_c-	-I1), s	31 1		20 0	20.5	413
Green Ext Time (p_c), s		15.0		0.7	0.0	1.6
ntersection Summary		100				-
HCM 6th Ctrl Delay	Em.		33.3	-	-	
HCM 6th LOS	-		-0			

HCM 6th Signalized Intersection Summary 8. Central Ave & Heartwood Dr

08/21/2024

	,	→	7	1	-	1	1	1	1	1	1	1	
Movement	EEL	EBT	EBR	WBL	WBT	WER	NBL	NBT	NER	SBL	SBT	SER	The State of the S
Line Configurations		47	7		4		*	*	75	- 15	4%		
Traffic Volume (veruh)	81	20	214	46	16	83	194	1071	56	81	1013	- 81	
Future Volume (withth)	81	20	214	46	16	83	194	1071	56	81	1013	81	
initial Q (Qb), voh	0	0	0	0	0	0	0	0	0	0	0	0	THE RESERVE OF
Ped-Bike Adj(A_pbT)	1.00		0 99	1 00		0 96	1 00		0.98	1 00		0.97	
Perking Bus, Adi	1.00	1.00	100	100	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approac	h	No			No	The state of the s	man a proper	No			No		
	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	
Adi Flow Rate, veh/h	85	21	140	48	17	50	204	1127	52	85	1066	71	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0 95	0.95	
Percent Heavy Veh. No.	2	2	2	2	2	. 2	2	2	2	2	2	2	
Cap vetvit	205	44	482	95	42	67	239	1186	981	104	1885	125	URLES THE REAL PROPERTY.
Army On Green	0 17	0 17	0.17	0 17	0 17	0 17	0.13	0.63	063	0.06	0.56	0.56	
Sat Flow, veryh	829	258	1577	263	746	391	1781	1870	1547	1781	3375	225	
Grp Volume(v), veh/h	106	0	140	115	0	0	204	1127	52	85	561	576	
Grp Sat Flow(s), veh/h/hr		0	1577	900	0	0	1781	1870	1547	1781	1777		AND DESCRIPTION OF THE PERSON NAMED IN
Q Servera ni s	0.0	0.0	69	47	0.0	0.0	11.5	56 8	13	48	20.9	20 9	
Cycle Q Clear(g.c) s	9.7	0.0	69	14.4	0.0	0.0	11.5	56 8	1.3	48	20.9		
Prop in Lane	0.80	ų.u	1.00	0 42	U.U	0.43	1.00	30.0	100	1.00	20.9	0 12	
Lane Grp Cap(c), yeh/h		0	482	203	0	0 43	239	1186	981	104	992	1018	NAME OF TAXABLE PARTY.
VIC Ratio(X)	0.43	0.00	0.29	0.57	0.00	0.00	0.85	0.95	0.05	0.81	0.57	0.57	
Avail Cap(c a) veh/h	339	0 00	582	294	0.00	0.00		1205	997	104	992	1018	
HCM Platoon Rase	1 00	1 00	1 00	1 00	1.00	100	100	1.00	1.00	100	1.00	1 00	ADDING OF
Upstream Fitter(I)	100	0.00	100	1.00	0.00	0.00	1.00	1 00	100	1.00	1.00	1.00	SUPPLEMENT OF THE PARTY.
Uniform Delay (d), s/veh		0.00	27.2	41 7	0.00	0.00	43 3	17.2	7.1	47.7	146	146	STATE OF THE PERSON NAMED IN
incr Detay (d2), sAwh	1.6	0.0	0.5	35	0.0	0.0	10.7	17.2 15.8	0.0	37.2	140	12	STATE OF THE PARTY OF THE
initial D DetayldD siveh			0.5	00	0.0	0.0	0.0	0.0	0.0			0.0	Harris - Parker
		0.0	2.7	3.0	0.0		5.7	25.9		0.0	00 81	8.3	
Nile Back OFD(50%), veh			2.1	3.0	0.0	0.0	5.1	25.9	0.4	32	8.1	8.3	and the state of t
Umpg Movement Delay			47 A	15.0		0.0		110.0	7.1	010	45.0	45.0	
LinGip Dalay(d),s/veh	40 7	0.0	27.6	45.2	0.0	0.0	54.1	33.0	71	84.8	15.8	15.8	
LnGrp LOS	D.	А	С	D	Α	A	D	С	Α	F	В	В	
Approach Vol., welvill		246	200		115			1383			1222		
Approach Delay, siven		33 3			45 2			35 1			20 6		
Approach LOS	100	C	-31,		D	ALC: A		D			C	HE	
Timer - Assigned Plan	1	2	10	4	5	đ		8				W	N
Phs Duration (G+Y+Rc).		70.0	250	22.0	18.3	62.2	1441	22.0					The state of the s
Change Period (Y+Rc).		50		4.5	45	50		45					
Max Green Setting (Gmi		66.0		24.0	21.5	50.5		24 0					
Max Q Clear Time (g_c-	113 15	58.8		11:7	135	22.9		16 4					
Green Ext Time (p_c), s		5.2		12	0.3	15.5		0.4	14	1000	000		
ntersection Summary		-				10-		ALC:		171	-		
HCM 6th Ctrl Delay			29,4	100	Ti Ci		-	100	-01	270	100	27.01	
HCM 6th LOS			C										

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Traffic Operations Study for the MicKelleyville Town Center Project W-Trans.

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