

# FEBRUARY 13, 2025 CDP\_2024-0004

PROJECT PLANNER CONTACT Liam Crowley 860 N Bush Street Ukiah, CA 95482 PHONE: 707-234-6650 FAX: 707-463-5709 crowleyl@mendocinocounty.gov		
PROJECT SUMMARY		
OWNER/APPLICANT:	Martin Reimann & Oliver Schilke 6353 W Sweetwater Drive Tucson, AZ 85745	
REQUEST:	Standard Coastal Development Permit to construct a single-family residence, landscaped berm, water catchment area, Accessory Dwelling Unit, storage shed, entry gate, and fence; improvements to an existing driveway and existing fencing; deepening an existing well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway.	
LOCATION:	In the Coastal Zone, 1.15± miles south of Albion, on the west side of State Route 1 (SR 1), located at 2300 N. Hwy 1, Albion; APN: 123-290-03.	
TOTAL ACREAGE:	12.5± Acres	
GENERAL PLAN:	Rural Residential 5-Acre, Planned Unit Development (RR:5:PD) General Plan (Chapter 7 – Coastal Element)	
ZONING:	Rural Residential 5-Acre, Planned Unit Development (RR:5:PD) Mendocino County Code Title 20, Division II	
CODE REFERENCE:	Family Residential: Single-Family Mendocino County Code (MCC) Section 20.376.010(A)	
APPEALABLE	Yes	
SUPERVISORIAL DISTRICT:	District 5 (Williams)	
ENVIRONMENTAL DETERMINATION:	Mitigated Negative Declaration	
RECOMMENDATION:	Approved with Conditions	

## **PROJECT BACKGROUND & INFORMATION**

**PROJECT DESCRIPTION:** The proposed development includes (1) the construction of a two thousand (2,000) square foot single-family residence, (2) the creation of a circular berm/knoll and landscaped area surrounding the residence, (3) the creation of a berm between the residence and an existing parking area, (4) a water catchment area, (5) the construction of a seven hundred forty-four (744) square foot "garage-studio" which would be permitted as an Accessory Dwelling Unit (ADU), (6) the construction of a five hundred forty-three (543) square foot storage shed, (7) improvements to an existing driveway, (8) repairing and raising an existing wooden fence, (9) deepening an existing well, (10) a new entry gate, and (11) a new fence near the entrance to the property. The project would also involve after-the-fact permitting of a driveway and mitigation of impacts to wetlands due to the development of the unpermitted driveway.



Fig 1. View of the western portion of the property looking west along the existing driveway.

**SITE CHARACTERISTICS:** The property is a blufftop lot on a marine terrace about one  $(1\pm)$  mile south of Albion. According to a Geotechnical Investigation prepared for the project by Brunsing Associates, Inc., the bluffs are approximately one hundred forty (140) to one hundred sixty (160) feet in height. The property slopes downward towards the western edge.

In 1981, the California Coastal Commission approved a Coastal Development Permit (CDP) to allow the construction of a single-family residence and installation of a well, septic system, and driveway on the property (1-81-85). The conditions of that permit required the applicant to construct a berm on the northern and eastern elevations of the residence to give the appearance of a knoll. The conditions also required the applicant to record an offer to dedicate both a vertical and lateral public access easement along the southern and western property lines. The conditions also required the recordation of a deed restriction related to geologic hazards. A fourteen (14) foot roadway easement runs along the westerly boundary of State Route 1 (SR 1) across the subject property, providing access to SR 1 from two (2) properties to the south (Mendocino County Official Records Book 736 Page 537). The offers to dedicate vertical and lateral public access easements were recorded in 1983. The deed restriction related to geologic hazards was also recorded in 1983. The offers to dedicate were accepted by the Coastal Land Trust in 2003 and 2004. Both public access easements were assigned to the Coastal Land Trust in 2005. The septic system was installed

in 1983 (Division of Environmental Health Septic Permit No. ST25022). The residence associated with CDP 1-81-85 was never constructed. The documents for CDP 1-81-85 did not show the orientation of the driveway, but it was most likely extended across the southern property line based on 1998 aerial imagery (see attached *Historical Aerial Imagery*). Remnants of this driveway still exist on the property (see "grass path" on attached *Plot Plan*). Two (2) wells currently exist on the property. CDP 1-81-85 most likely authorized the eastern well shown on the current Plot Plan. Although not shown on the plot plan included in CDP 1-81-85, the map included in the wetland delineation for CDP 83-02 shows only the eastern well.



Fig 2. View of the existing vertical access easement along the southern property boundary looking west.

In 2003, the County approved a CDP to allow the installation of a chain link driveway gate, chain link fence, conversion of a test well into a production well, solar powered pump, water storage tank, and storage container on the property. The gate, fence, solar pump, and water tank were constructed under building permit BF\_2005-0507. When staff visited the property in February 2024, portions of the chain link fence were observed. However, the chain link gate was not observed. A storage container was not observed. A water tank was observed in a similar location to that approved under CDP 83-02, though it was not clear whether this was the same water tank.

In 2008, the County approved a Minor Subdivision, Use Permit, and CDP to divide the subject property into two (2) lots, to apply the Planned Unit Development (PD) Combining District to the property, and to construct a single-family residence and appurtenant development on one of the resulting lots. Ultimately, the permit expired before the subdivision could be finalized and the residence was never constructed. However, the PD Combining District was applied to the property. The tentative map for this subdivision showed both the eastern and western wells currently on the property.



Fig 3. View of the existing driveway looking north.

In 2008, the Coastal Commission denied an appeal and upheld the County's approval of a CDP for the Mendocino Land Trust to open a public access trail within the vertical and lateral easements, which included installation of signage, fencing, and a segment of raised boardwalk. When staff visited the site in February 2024, fencing and signage along the easement was observed, but a boardwalk was not observed.



Fig 4. Terminus of the lateral access easement along the western edge of the property.

Some time between 2019 and 2021, a new driveway was developed on the property without a permit (see attached *Historical Aerial Imagery*). In 2019, the County approved a building permit for trenching to bury underground electrical cable for both wells. The underground electrical cable follows the same path as the unpermitted driveway. Both the driveway and underground utilities cross a wetland previously mapped in 2005 and 2007. The driveway is currently paved with gravel.

Other existing development on the property includes electrical panels, underground water pipes, water tanks. According to the 2024 *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* prepared for the project, most of the site is vegetated with sweet vernal grass, slough sedge, horsetail, salal, Monterey cypress trees, and bishop pine trees. Some isolated areas of landscaping are also present, including fruit trees and Leyland cypress. An existing encroachment onto SR 1 was permitted by Caltrans under Permit #0119-6-RS-0443.

#### Public Services:

Access:State Route 1 (SR 1)Water District:NoneSewer District:NoneFire District:Albion Little River

**RELATED APPLICATIONS:** The following applications have occurred on the subject parcel or on the surrounding properties and are relevant to the proposed project. All projects listed below have already been approved, unless otherwise stated.

#### Subject Parcel Projects:

- **1-81-85:** Coastal Development Permit for construction of a single-family residence and installation of a well, septic system, and driveway. Approved by Coastal Commission 10/03/1981.
- **CDP 83-02:** Coastal Development Permit to install a 12' x 4' chain link driveway gate and a 50' long chain link fence along the northeastern end of the property, convert a test well into a production well, install a solar powered pump and a water storage holding tank, and place an 8' x 20' storage container with a height of 10' within a group of trees in the northeastern corner of the parcel. Approved 07/25/2003.
- **BF\_2005-0507:** Building Permit to install a chain link gate, fence, solar pump and water tank Finalized 06/07/2005.
- CDMS 12-2005/CDU 14-2003/CDP 67-2006: Coastal Development Minor Subdivision to divide a 12.5± acre parcel into two (2) parcels of 6± acres each; a Coastal Development Use Permit to implement the Planned Unit Development (PD) Combining District designation; and a Coastal Development Permit to construct a single-family residence on the eastern proposed 6± acre parcel (Parcel 2). The proposed 2,445± square foot single-story residence with an attached 640± square foot attached garage (3,085± square feet total) would have been 18 feet in height above natural grade. Associated development would have included the installation of an on-site septic disposal system, connection to an existing on-site water well, construction of a new encroachment onto State Route 1 (SR 1), and extension of underground utilities to the proposed building site. Approved 01/10/2008. Expired 10/10/2010.
- **BF\_2007-1035:** Building Permit for a single-family residence and attached garage. Expired 12/31/2008.
- CDP 40-2006: Coastal Development Permit to open a public access trail along State Route 1 (SR 1) to the ocean bluff within an easement on private property. The project would have included signage, fencing, and boardwalk areas to define the public trail. Approved 03/27/2008. Appealed to the Board of Supervisors 06/24/2008. Appeal denied and approval upheld by the Board of Supervisors. An additional condition of approval was added identifying the landowner as additional insured by the Mendocino Land Trust. Appeal to the Coastal Commission 07/07/2008. No

Substantial Issue found per staff recommendation on 09/12/2008. Permit issued 07/19/2008. Expired 07/19/2010.

- CDPR 67-2006 (2009): Renewal of Coastal Development Permit CDP 67-2006. Approved 11/12/2009. Resulted in a new expiration date of 01/10/2011.
- **CDPR 40-2006 (2010):** Renewal of Coastal Development Permit 40-2006. Approved 08/25/2010. Resulted in a new expiration date of 07/19/2011.
- **BF\_2019-0593:** Building Permit for trenching to bury underground electrical cable for two (2) wells. Well one (1) has sub-feed and well two (2) has main panel. Finalized 05/11/2021.

**AGENCY COMMENTS:** On August 22, 2024, project referrals were sent to the following responsible or trustee agencies with jurisdiction over the Project. Their submitted recommended conditions are discussed in this staff report and contained in Conditions of Approval. A summary of the submitted agency comments are listed below.

TABLE 1: Referral Agency Responses		
REFERRAL AGENCIES	COMMENT	
Planning Division (Fort Bragg)	No Response	
Department of Transportation	No Response	
Division of Environmental Health (Fort Bragg)	No Comment	
Building Inspection (Fort Bragg)	No Response	
Assessor	No Response	
Air Quality Management District	No Response	
Sonoma State University	Comments	
Caltrans	No Response	
CAL FIRE (Land Use)	Comments	
California Dept. of Fish & Wildlife (CDFW)	Comments	
California Coastal Commission	Comments	
Regional Water Quality Control Board	Comments	
Cloverdale Rancheria	No Response	
Redwood Valley Rancheria	No Response	
Sherwood Valley Band of Pomo Indians	No Comment	
Albion Little River Fire District	No Response	

On September 4, 2024, the Northwest Information Center at Sonoma State University (NWIC) noted that a 2005 archaeological study covering 100% of the project area identified no cultural resources. NWIC recommended that local Native American tribes be contacted regarding the project. NWIC noted that the site has a low possibility of containing unrecorded archaeological sites and that no further study is recommended.

On September 21, 2022, CAL FIRE issued State Fire Safe Regulations Conditions of Approval for the project. CAL FIRE requires that the *Driveway Standard*, *Address Standard*, and *Maintain Defensible Space and Fuels Modification Standard* be adhered to.

On August 27, 2024, CDFW noted that they do not have sufficient information to comment on the project until the Restoration Mitigation and Monitoring Program (RMMP) is approved by the Regional Water Quality Control Board (RWQCB). RWQCB approved the RMMP on November 26, 2024. Subsequently, the 2024 *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* and approved RMMP were sent to CDFW. On January 9, 2025, CDFW provided comments on the project (see attached *CDFW Comments*). Those comments are discussed in the "Environmentally Sensitive Habitats and Other Resources Areas" section below.

On December 13, 2023, the California Coastal Commission noted that the proposed project is within the County's jurisdiction. The Coastal Commission also noted that the driveway and turnouts were constructed within or adjacent to wetlands without a Coastal Development Permit, which is inconsistent with Mendocino County LCP Policy 3.1-7 and County Code Section 20.496.020. The letter also states that "future application to Mendocino County Planning Department should include a proposal for removal of the current driveway and a restoration, mitigation and monitoring plan to address how areas impacted without the benefit of a permit will be restored to ensure that impacts are reduced to a less-than-significant level. The wetland mitigation plan should propose creation of new or expanded wetlands at a ratio of wetlands created or expanded to wetlands filled at a ratio large enough to compensate for temporal loss of wetland values and functions between the time the wetlands were filled or otherwise impacted by unauthorized driveway construction and the full establishment of wetland values and functions in the wetland area to be created or expanded."

On April 26, 2024, the North Coast Regional Water Quality Control Board (RWQCB) issued an Inspection Memo and Notice of Violation related to a March 27, 2024 inspection of the property that revealed unauthorized discharges to waters of the state (see attached *RWQCB Inspection Memo* and *RWQCB Notice of Violation*). To bring the site back into compliance, RWQCB recommended that the owner conduct a wetland delineation, prepare a restoration mitigation and monitoring plan (RMMP), submit the applicable permit application(s) to RWQCB, and implement the RMMP.

# PROJECT ANALYSIS

## LOCAL COASTAL PROGRAM CONSISTENCY:

**Land Use and Planning Areas**: The property is within the Rural Residential (RR-5) land use classification. Per Mendocino County Coastal Element Chapter 2.2, the Rural Residential classification is intended,

"...to encourage local small scale food production (farming) in areas which are not well suited for large scale commercial agriculture, defined by present or potential use, location, mini-climate, slope, exposure, etc. The Rural Residential classification is not intended to be a growth area and residences should be located as to create minimal impact on agricultural viability."

The Principal Permitted Uses within the RR land use classification include residential and associated utilities, light agriculture, and home occupation. Construction of a single-family residence and Accessory Dwelling Unit (ADU) is consistent with the residential Principal Permitted Use. The creation of a landscaped berm/knoll, water catchment area, storage shed, improvements to an existing driveway, repairs and improvements to fencing, deepening a well, new entry gate and fence, after-the-fact permitting, and mitigation to wetlands are consistent with utilities associated with the principally permitted residential use. Possible locations for the residential agricultural uses of the property are similarly constrained. According to the state's Farmland Mapping and Monitoring Program (FMMP), the existing vegetation on the property is suited to the grazing of livestock. After accounting for undevelopable areas, the amount of potential pastureland on the property is very low. Residential use is appropriate. The development of an ADU is exempt from the density limits imposed by Chapter 2.2 (one dwelling per legally created parcel) in accordance with Mendocino County Code (MCC) Chapter 20.458.

The property is within the Dark Gulch to Navarro River Planning Area described in Coastal Element Chapter 4.9. However, none of the policies within this chapter apply to the project.

**Zoning**: The property is within the Rural Residential (RR:5) zoning district. Per MCC Section 20.376.005, the Rural Residential zoning district is intended,

"...to encourage and preserve local small scale farming in the Coastal Zone on lands which are not wellsuited for large scale commercial agriculture. Residential uses should be located as to create minimal impact on the agricultural viability."

As noted in the Land Use and Planning Areas section above, the property has very low agricultural viability. Per MCC Section 20.376.010, the proposed residence is consistent with the "Family residential: Singlefamily" principal permitted use. The other elements of the project are considered accessory uses in accordance with MCC Chapter 20.456. Per MCC Section 20.376.025, the proposed residence and ADU meet the maximum dwelling density requirements for the RR district. Per MCC Sections 20.376.030 and 20.376.035, the minimum front, rear, and side yard setbacks for this property are fifty (50) feet. The proposed single-family residence, ADU, and storage shed would be located greater than fifty (50) feet from the nearest property line (see attached Plot Plan). Most portions of the fence and gate lie within the minimum setback. However, in accordance with MCC Section 20.444.015(E), view-obscuring fences in rear or side yards not having street frontage may be up to eight (8) feet in height. Fences in front yards may not exceed three and one half (3.5) feet. The project would raise the fence along the southern property boundary to six (6) feet, lower the fence along the western property boundary to about one (1) foot, and add a new fence and gate near southeastern corner of the property. However, some of these improvements would be located within wetland ESHA or ESHA buffers and may not be permitted, including the new gate and fence in the southeastern corner. Therefore, staff recommends that these features be removed from the scope of this Coastal Development Permit or moved to an area outside of ESHA buffers (see the Environmentally Sensitive Habitat and Other Resource Areas section below). This can be accomplished by requiring, as a condition of approval, that the applicant submit a revised plot plan and fencing plan showing that the proposed fencing development would either be removed from the scope of work or occur entirely outside of ESHA buffers, and that any view-obscuring fencing placed within fifty (50) feet of the eastern property boundary (front lot line) would not exceed three and one half (3.5) feet.

Per MCC Section 20.376.045, the building height limit for this property is twenty-eight (28) feet above natural grade because it is not within a Highly Scenic Area. The proposed structures meet the height limit requirements (see attached *Plot Plan* and *Floor Plans & Elevations*). Per MCC Section 20.376.065 the maximum lot coverage for this property is ten (10) percent, or fifty-four thousand four hundred fifty (54,450) square feet. The proposed development would not exceed this limit.

Though the property is within the Planned Unit Development (PD) Combining District, none of the regulations contained in MCC Chapter 20.428 apply to the proposed development because it consists only of single-family residential and accessory uses.

Per MCC Section 20.444.020, a corridor preservation setback of forty (40) feet applies to the proposed development. All proposed development would be placed outside of the setback (see attached *Plot Plan*).

Per MCC Section 20.456.015, the proposed ADU, storage shed, berms, water catchment area, driveway improvements, fencing, well improvements, and gate are accessory uses that are permitted in the RR zoning district.

Per MCC Section 20.458.010, the proposed ADU would not cause the total number of permitted ADUs within the Coastal Zone to exceed five hundred (500) units. The ADU may be permitted simultaneously with the residence and other development in accordance with MCC Section 20.458.020(A). In accordance with MCC Sections 20.458.020(E) and (F), staff recommends that a condition of approval be adopted requiring the recordation of a deed restriction prohibiting the use of the property for transient habitation. A deed restriction prohibiting the construction of bluff protective devices has already been recorded against the property in accordance with CDP 1-81-85. The proposed ADU would be located more than one hundred twenty-five (125) feet from the bluff edge. Per MCC Section 20.458.025(E)(1), the floor space of the proposed ADU is less than one thousand two hundred (1,200) square feet. Per Section 20.458.040(B), (C), and (D), the Division of Environmental Health (DEH) responded to the proposed project with no comments. The septic system was designed for a total of three (3) bedrooms. The proposed development has a total of three (3) bedrooms. DEH policy requires a water supply of one gallon per minute per dwelling unit, or a minimum of one half (0.5) gallons per minute per dwelling unit when supplemented by at least two thousand five hundred (2,500) gallons of water storage capacity. The applicant provided a well test showing that the western well produces about one and three tenths (1.3) gallons per minute. The property contains three (3) existing water tanks that collectively exceed two thousand five hundred (2,500) gallons of water storage capacity. CAL FIRE has issued Fire Safe Regulations Conditions of Approval for the project. Per Section 20.458.045, the proposed ADU (A) would not be located within ESHA or ESHA buffers (see Environmentally Sensitive Habitat and Other Resource Areas section below), (B) would not be located within one hundred

twenty-five (125) feet of the bluff edge, (C) would not be located within a Highly Scenic Area, (E) would be located more than two hundred (200) feet from any property with AG, RL, FL, or TPZ zoning, (G) would not interfere with the vertical or lateral public access easement on the property, and (I) would not be located on a property with any known archaeological resources (see Archaeological and Cultural Resources section below). Per Section 230.458.045(D), the proposed ADU may require more than twenty (20) cubic yards of grading because the structure would be located on a slope and construction would involve excavating directly into the slope (see attached *Floor Plans & Elevations*) and the applicant has indicated that approximately two thousand (2,000) cubic yards of cut and one thousand seven hundred (1,700) cubic yards of fill would occur for the entirety of the proposed development. However, the grading would comply with the standards established in Chapter 20.492 (see the Grading, Erosion, and Runoff section below). Per Section 20.458.050, the proposed garage attached to the ADU would provide adequate parking for the ADU.

Per MCC Sections 20.472.010 and 20.472.015, ample space is available within the proposed turnaround and garage attached to the ADU to allow a total of three (3) parking spaces.

**Grading, Erosion, and Runoff:** Per MCC Section 20.492.005, the Coastal Permit Administrator "*shall determine the extent to which the following standards should apply to specific projects*". According to the application, the project will involve two thousand (2,000) cubic yards of cut, one thousand seven hundred (1,700) cubic yards or fill, and nine hundred (900) cubic yards of import or export. The maximum height of cut and fill slopes would be four (4) feet, and the location of borrow or disposal would be Geo Aggregates in Fort Bragg. According to the Geotechnical Investigation prepared for the project, the residence would be constructed four (4) feet below existing grade to reduce visibility from the surrounding area. The Investigation recommended that a minimum of eighteen (18) inches of material below the final subgrade be over-excavated and replaced with properly compacted fill, or that interior slab-on-grade floors be structurally designed to span between foundation elements. The Investigation also recommended that fille material should be free of perishable matter and rocks greater than three (3) inches in largest dimension and have an expansion index less than thirty (30). Fill should be placed in thin lifts (six to eight inches depending on compaction equipment), moisture conditioned and compacted to at least ninety (90) percent relative compaction.

Staff recommends that the standards contained in Sections 20.492.010(C), (E), (G), 20.492.015(B), (C), 20.492.020(A), (B), 20.492.025(D), and (I) be applied to the project. In addition, staff recommends a condition of approval requiring that runoff and drainage be directed away from the bluff face in accordance with Coastal Element Policy 3.4-9. As explained in the Environmentally Sensitive Habitat and Other Resource Areas section below, the water catchment area should be removed or repositioned so that it does not intersect with any ESHA buffers. A grading permit would be required for the work in accordance with MCC Chapter 18.70.

**Environmentally Sensitive Habitat and Other Resource Areas**: MCC Chapter 20.488 establishes general review criteria that must be applied to all CDP applications, including that:

- (A) Development shall not significantly degrade, or destroy the habitat for, endangered plant and animal species, including native mammals and resident and migratory birds. Diversity, both functionally and numerically, shall be maintained.
- (B) The productivity of wetlands, estuaries, tidal zones and streams shall be protected, preserved, and, where feasible, restored.
- (C) Approved grading activities shall be conducted in a manner that will assure that environmentally sensitive habitat areas will be protected from adverse impacts that can result from mechanical damage and undesirable changes in the water table, subsurface aeration and impacts to the root system of riparian vegetation, the alteration of surface or subsurface drainage, or other environmental conditions.
- (D) Wetland buffer areas (the transition areas between wetland and upland habitats) shall be protected, preserved, and, where feasible, restored.

Additionally, Coastal Element Chapter 3.1 and MCC Chapter 20.496 contain protections for Environmentally Sensitive Habitat Areas (ESHAs). Per Section 20.496.010, ESHAs include "anadromous fish streams, sand dunes, rookeries and marine mammal haul-out areas, wetlands, riparian areas, areas of pygmy vegetation which contain species of rare or endangered plants and habitats of rare and endangered plants and animals".

Coastal Element Policy 3.1-7 and MCC Section 20.496.020 require that a one hundred (100) foot buffer area be established between proposed development and ESHA. Coastal Element Policy 3.1-4 and MCC Section 20.496.025 limit development or activities in wetlands to eleven (11) different uses. Residential use is not permitted in ESHA or wetlands.

On April 26, 2024, the North Coast Regional Water Quality Control Board (RWQCB) issued an Inspection Memo and Notice of Violation related to a March 27, 2024 inspection of the property that revealed unauthorized discharges to waters of the state (see attached *RWQCB Inspection Memo* and *RWQCB Notice of Violation*). Wetlands on the property had been filled by the installation of the gravel driveway connecting the site entrance to the proposed site of the residence and ADU. To bring the site back into compliance, RWQCB recommended that the owner conduct a wetland delineation, prepare a restoration mitigation and monitoring plan (RMMP), submit the applicable permit application(s) to RWQCB, and implement the RMMP.



Fig 5. View of unpermitted driveway looking west near where it intersects with the identified wetland.

Subsequently, a wetland delineation, biological survey, and botanical survey was conducted on the property (see attached *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys*). According to the report, no special-status plant species or plant communities were observed during the surveys. The wetland delineation revealed a one and one tenth (1.1) acre wetland on the property. No special-status animals were observed during the surveys. A one hundred (100) foot buffer was established around the identified wetland. The proposed single-family residence, berm/knoll, ADU, and storage shed would be located entirely outside of the one hundred (100) foot buffer. However, portions of the water catchment area, portions of the existing driveway, portions of the existing wooden fence, existing eastern well, new entry gate, and new fence would either be located directly within the wetland or the wetland buffer area. These features are not permitted within the wetland ESHA or wetland ESHA buffer area because they are accessory structures associated with residential development, which is not a permitted use within wetlands.

Therefore, the proposed development located within ESHA or ESHA buffers should be removed from the scope of this CDP or reposition to avoid ESHA and ESHA buffers. Portions of the water catchment area, improvements to the existing driveway, portions of the proposed improvements to existing fencing, proposed deepening of the existing eastern well, new entry gate, and new fence can be removed or

repositioned without issue. However, the existing driveway is currently the sole means of access between the entrance to the property and the proposed site of the residence and ADU. The existing western well and septic system are also located in this western area of the lot. If development is to occur in the western area of the lot, access must be provided either from the existing driveway or an alternative path. The identified wetland and buffer area spans the entire width of the lot. The wetland and buffer area crosses the proposed driveway authorized by CDP 1-81-85. Therefore, there is no orientation of driveway that would allow access to the western section of the lot while simultaneously avoiding ESHA and ESHA buffers. This means that one element of the proposed development (after-the-fact permitting of a driveway) would be inconsistent with ESHA and ESHA buffer regulations.

Staff recommends that a condition of approval be adopted which would require that the applicant provide a revised plot plan (1) showing the extent of the wetland ESHA and associated one hundred (100) foot buffer, and (2) showing that the portions of the water catchment area, proposed improvements to the existing driveway, proposed improvements to existing fencing, deepening of existing well, new entry gate, and new fence that overlap ESHA and/or ESHA buffers have either been removed from the scope of work or repositioned in a location further than one hundred (100) feet from the identified wetland ESHA, including the newly created wetland areas required by the RMMP.

The Biological Scoping Survey, Wetland Delineations, & Botanical Surveys report asserts that "the potential effects on presumed ESHA, specifically the presumed wetland, can be significantly reduced or entirely circumvented by adopting the mitigation strategies outlined below". The mitigation measures recommended by the biologist include (1) nest protection avoidance measures, (2) limiting construction to daylight hours, (3) contractor training, (4) pre-construction surveys for amphibians and insects, (5) debris management, (6) rain event protocol, (7) replanting lost wetland vegetation, (8) a staging area plan, (9) Best Management Practices (BMPs), (10) cleaning machinery, (11) planting only native species, (12) removal and replacement of non-native species, and (13) the implementation of a Restoration Mitigation and Monitoring Plan (RMMP) to mitigate prior impacts to wetlands and create new wetland areas. Staff recommends that these recommendations be adopted as conditions of approval.

In accordance with RWQCB recommendation, the applicant prepared an RMMP that was approved by RWQCB on November 26, 2024. The plan would require the creation of approximately one hundred twentytwo one thousandths (0.122) acres of new wetland area. The RMMP identifies the location where new wetlands would be created, the actions taken to grade the land and allow water to inundate, the source of water, and timeline for implementation. The RMMP also identifies monitoring, performance, and success criteria, adaptive management and long-term protection contingencies, and agency coordination, documentation, and reporting requirements. Staff recommends that the requirements of the RMMP be adopted as conditions of approval.

The existing driveway's placement within wetland ESHA and resulting LCP inconsistency could be resolved by either (1) denying that portion of the proposed development, (2) requiring the removal of the existing driveway and restoration of the areas in which it intersects ESHA, (3) requiring the removal, relocation, and restoration of the driveway to an area that would completely avoid ESHA and/or ESHA buffers, or (4) denying the entirety of the proposed development. Simply denying the after-the-fact permitting of the driveway would not resolve the inconsistency because the driveway would remain within ESHA and/or ESHA buffers. However, staff believes that requiring the removal of the existing driveway and restoring the areas in which it intersects ESHA or relocating the driveway to an area that would completely avoid ESHA and/or ESHA buffers would constitute a regulatory taking (see Takings Analysis section below). These options would eliminate access to the proposed location of the residence, ADU, existing septic system, and well. Therefore, these options would require that residential development occur only in the northeastern corner of the property where an alternative residence, septic system, well, driveway, encroachment onto SR-1, and electrical infrastructure could be developed. Indeed, the Biological Scoping Survey, Wetland Delineations, & Botanical Surveys report notes that the "positioning of the driveway, crucial for connecting the Shoreline Highway with the proposed residence, does not allow for relocation elsewhere on the property without compromising ecological integrity." Therefore, the least environmentally damaging alternative would be to allow the existing driveway to remain but implement the RMMP and other mitigation measures to minimize inconsistencies with the LCP.



Fig 6. Looking west at a portion of the proposed driveway authorized by CDP 1-81-85.

On January 9, 2025, CDFW provided several comments and recommendations for the project (see attached *CDFW Comments*). First, CDFW stated that the site's resources are not reflected in the site plan. Accordingly, CDFW recommends that a revised site plan be submitted which shows the location of proposed seasonal wetland creation and the extension of ESHA buffer areas based on the new area of created wetlands, the full extent of ESHA and ESHA buffers, and the location of low, symbolic fencing. As such, staff recommends that a condition of approval be adopted which would require the applicant to include this information on a revised site plan prior to issuance of a building permit. CDFW has also expressed that they are unwilling to grant a reduced 50-foot buffer until such a map is received. Therefore, staff recommends a condition outlining the steps that would determine whether a 50-foot reduced buffer would be permitted.

CDFW questioned whether the landscaped berm proposed for the project would be necessary and stated that the construction of a berm and associated fill could significantly increase the risk of introduction of invasive plant species. The landscaped berm was a requirement of the original CDP for this property but would no longer be required as visual resource mitigation because the site is not located in a designated Highly Scenic Area. However, County ESHA regulations would not require that the berm be removed from the scope of work because it would be located more than one hundred (100 feet from ESHA. However, staff recommends a condition of approval requiring that heavy construction equipment entering the site be cleaned to prevent invasive plant seeds or other materials attached to wheels be deposited onto the site. This would help prevent the introduction of invasive species due to construction of the berm.

CDFW noted that the water catchment system shown on the site plan would encroach upon ESHA and/or ESHA buffers. Accordingly, the same condition of approval requiring the submittal of a revised site plan would ensure that the water catchment system is either relocated entirely outside of ESHA buffers or removed from the scope of work.

CDFW also commented on CAL FIRE defensible space requirements. Defensible space can be maintained surrounding the proposed single-family residence, shed, and ADU without encroaching upon ESHA and/or ESHA buffers.

CDFW noted that future development or maintenance of the eastern watercourse and its culvert would be subject to notification to CDFW under Fish & Game code section 1600 in addition to permitting by the RWQCB. Accordingly, staff recommends a condition of approval memorializing these permitting requirements.

CDFW recommends that Pacific reedgrass (*Calamagrostis nutkaensis*) be added to the proposed planting palette for the RMMP. Therefore, staff recommends that the recommended condition of approval for implementation of the RMMP be amended to include Pacific reedgrass within the list of plants to be established on the site. In accordance with CDFW comments, staff also recommends that a condition of approval be adopted encouraging the use of transects or plots to measure cover during the monitoring and reporting period for the RMMP.

Per CDFW comments, staff also recommends that a condition of approval be adopted (1) establishing avoidance and minimization measure for the California red-legged frog and bat species, (2) requiring that fencing be of wildlife-friendly design, (3) that the landscaping notes and plans be revised to ensure that culinary plants and any plants used for the landscaped berm be properly separated from native vegetation and comprised of locally native species, respectively, (4) that invasive species be targeted for removal for a period of ten (10) years, (5) that the applicant install low symbolic fencing along the edges of the driveway that encroach upon ESHA and/or ESHA buffers and the areas where proposed development abuts ESHA and/or ESHA buffers and that this fencing be shown on the revised site plan, (6) that the annual monitoring report be amended to include the Obscure bumble bee, Western bumble bee, Townsend's big-eared bat, White-tailed kite, Lotis blue butterfly, Northern red-legged frog, California red-legged frog, and Behren's silverspot butterfly as target wildlife species, (7) that contingencies be added to recommended conditions should species be found during pre-construction surveys, (8) that mitigation measures be amended to ensure that only a qualified biologist conduct an annual review, and (9) that the hedges being established as physical barriers be comprised of native species and shall be shown on the revised site plan.

**Hazards Areas**: Per MCC Section 20.500.015 and Coastal Element Policy 3.4-1, a Geotechnical Investigation was prepared for the project. Per Section 20.500.020(A), (C), (D), (E) and Coastal Element Policy 3.4-3, no evidence of active faulting was observed in the site vicinity and published references do not indicate faults on or trending towards the property. No active landsliding or erosion was observed on the property bluffs. The Investigation notes that the upper terrace deposits appear to be currently stable and well vegetated. The lower bluffs appeared stable with minor evidence of sloughing observed. Per Section 20.500.020(B) and Coastal Element Policy 3.4-7, the Investigation concluded that a bluff setback of forty-eight (48) feet would be sufficient. The bluff setback was based on a seventy-five (75) year economic lifespan of structures, a slope stability analysis, the projection of increased retreat rates resulting from sea level rise, and a safety factor of one and one half (1.5). The proposed development would be located approximately fifty (50) feet from the bluff edge. Per Section 20.500.020 and Coastal Element Policy 3.4-8, drought tolerant vegetation is required within the bluff setback. Therefore, staff recommends a condition of approval which would require that any proposed landscaping within the bluff setback be drought tolerant.

Per MCC Section 20.500.025 and Coastal Element Policy 3.4-13, CAL FIRE has issued their State Fire Safe Regulations Conditions of Approval for the project, which would mitigate fire hazard risk. Staff recommends a condition of approval requiring that the proposed development implement the standards required by CAL FIRE.

**Visual Resources and Special Treatment Areas**: Per MCC Section 20.504.015, the property is not within a Highly Scenic Area and is not subject to the associated development criteria. Per MCC Section 20.504.035, the proposed development would include downcast and shielded exterior lighting (see attached *Plot Plan*). Nevertheless, staff recommends memorializing the standards contained in this section as a condition of approval.

**Agricultural Resources:** Per MCC Section 20.508.020(A) and Coastal Element Policies 3.2-9 and 3.2-13, the proposed dwellings would be located more than eight hundred (800) feet from the nearest agriculturally designated parcel.

**Transportation, Utilities, and Public Services:** Per MCC Section 20.516.015(A), (B), and Coastal Element Policies 3.8-1, 3.8-9, and 3.9-1, the proposed development would be served by an existing septic system, well, and water storage tanks. The septic system is designed for the same number of bedrooms that would be developed by the project. The well and water tanks combine to provide adequate water supply to the proposed development in accordance with DEH policy and as described in the Zoning section above. The Department of Transportation and Caltrans did not respond to referral of the project. Per Coastal

Element Policy 3.5-9, existing access directly onto SR 1 is already permitted on the site through a Caltrans encroachment permit.

**Archaeological and Cultural Resources**: On September 4, 2024, the Northwest Information Center at Sonoma State University (NWIC) noted that a 2005 archaeological study covering 100% of the project area identified no cultural resources. NWIC recommended that local Native American tribes be contacted regarding the project. NWIC noted that the site has a low possibility of containing unrecorded archaeological sites and that no further study is recommended. The Mendocino County Archaeological Commission discussed the project at their meeting on June 12, 2024. The Commission determined that the existing survey was adequate and added the 'discovery clause' as a recommended condition. The 'discovery clause' has been incorporated as a recommended condition of approval for this CDP. Therefore, the project meets the requirements of MCC Chapter 22.12 and Coastal Element Policy 3.5-10.

**Public Access:** Per MCC Section 20.528.010, 20.528.015, and Coastal Element Policies 3.6-9 and 3.6-28, an existing vertical and lateral access easement exists along the southern and western boundaries of the property, which is managed by the Mendocino Land Trust. Provision of new access is unnecessary. The proposed development would not interfere with existing access because development would not occur within the access easement or between the easement and the bluff face.



Fig 7. View of vertical/lateral access easement, including installed signage.

**Takings Analysis:** As noted in the Environmentally Sensitive Habitat and Other Resource Areas section above, the proposed after-the-fact permitting of the existing driveway overlaps ESHA and/or ESHA buffers and is therefore inconsistent with the LCP. This inconsistency cannot be remedied by special conditions, siting the development in a different location, or reducing the scale of the project because such alternatives would either prevent adequate access to the location of proposed development or would result in a regulatory taking.

Therefore, under normal circumstances, the County of Mendocino would deny after-the-fact permitting of the existing driveway. However, Coastal Act Section 30010 forbids the denial of a permit *"in a manner which will take or damage private property for public use, without the payment of just compensation therefore."* 

Consequently, the Coastal Act imposes on the County the duty to assess whether its action might constitute a taking. If the County concludes that its action does not constitute a taking, then it may deny the project on finding that its actions are consistent with Section 30010. If the County determines that its action would constitute a taking, then it applies Section 30010 to consider how the project may be approved. In the latter situation, the County may propose modifications to the development to minimize any Coastal Act inconsistencies, while still allowing a reasonable amount of development.

The Fifth Amendment of the United States Constitution provides that private property shall not "be taken for public use, without just compensation." Article 1, section 19 of the California Constitution provides that "[p]rivate property may be taken or damaged for public use only when just compensation…has first been paid to, or into court for, the owner."

Federal courts have identified four types of regulatory takings, including (1) permanent physical invasions, (2) denials of all economically beneficial use, (3) general regulatory takings in which the regulation goes too far, and (4) land use exactions (*Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 548 (2005)*). For this project, the relevant types of regulatory takings include types (2) and (3).

Regulation that denies all economic use is governed by the test first established in the case of *Lucas v*. South Carolina Coastal Council, 505 U.S. 1003, 1015-16 (1992). The Court has recognized that these cases are relatively rare because they are applicable only "in the extraordinary circumstance when no productive or economically beneficial use of land is permitted" or "where the government has deprived a landowner of all economically beneficial uses" or rendered the property "valueless". In California, courts have followed the "valuation rule", where the use of the property that remains after regulation determines whether an owner has been deprived of economically beneficial use (see Terminals Equip. Co. v. City and County of San Francisco, 221 Cal. App. 3d 234 (1990)).

When applied to the proposed development, it appears that the applicable regulations would not deprive the owners of all economically beneficial uses because (1) the regulations do not deprive the owners of their right to exclude others from their land, (2) the regulations do not deprive the owners of their right to sell the property, and (3) the property would retain economic value due to the potential of developing economically beneficial uses in the northeastern corner of the property that does not intersect with ESHA and/or ESHA buffers.

Even if the applicable regulations would not deprive the owners of all economically beneficial use, they may nonetheless go too far in placing a public burden on private owners. This category of regulatory takings is governed by the case of *Penn Central Transportation Company v. City of New York, 438 U.S. 104 (1978).* Though this case did not establish a rigid test for takings, it identified several factors of significance to determine whether a taking has occurred, including (1) the economic impact of the regulation on the landowner, (2) the extent to which the regulation interferes with distinct investment-backed expectations, and (3) the nature of the governmental action. In *Kavanau v. Santa Monica Rent Control Board, 16 Cal. 4th 761 (1997)*, the California Supreme Court listed 10 additional, nonexclusive factors that could be relevant to determine whether a taking would occur. The factors outlined in *Kavanau* need not be used as a checklist but applied only as appropriate. They include:

- (1) Whether the regulation interferes with interests that are sufficiently bound up with the reasonable expectations of the claimant to constitute property for Fifth Amendment purposes;
- (2) Whether the regulation affects the existing or traditional use of the property and thus interferes with the property owner's primary expectation;
- (3) The nature of the State's interest in the regulation and, particularly, whether the regulation is reasonably necessary to the effectuation of a substantial public purpose;
- (4) Whether the property owner's holding is limited to the specific interest the regulation abrogates or is broader;
- (5) Whether the government is acquiring resources to permit or facilitate uniquely public functions such as government's entrepreneurial operations;

- (6) Whether the regulation permits the property owner to profit and to obtain a reasonable return on investment;
- (7) Whether the regulation provides the property owner benefits or rights that mitigate whatever financial burdens the law has imposed;
- (8) Whether the regulation prevents the best use of the land;
- (9) Whether the regulation extinguishes a fundamental attribute of ownership; and
- (10) Whether the government is demanding the property as a condition for the granting of a permit.

When analyzing the project under the *Penn Central* and *Kavanau* decisions, it appears that either (1) denial of the entirety of the proposed development, (2) requiring the removal of the existing driveway and restoration of the areas in which it intersects ESHA, or (3) requiring the removal, relocation, and restoration of the driveway to an area that would completely avoid ESHA and/or ESHA buffers would result in a regulatory taking. Each of these options would ultimately require that residential development of the property, and therefore an attempt at deriving economically beneficial use of the property, must occur in the northeastern corner of the property that does not overlap ESHA and/or ESHA buffers.

To limit development to the northeastern corner of the property (an approximately two (2±) acre area) would impose a significant economic impact on the landowner because it would require that (1) a new septic tank be installed in the northeastern corner with septic transmission lines that do not cross through ESHA and/or ESHA buffers, and be located at least five (5) feet from the residence; (2) that a new leach field be designed and constructed in the northeastern corner that would be located at least eight (8) feet from the residence; (3) that a new well be drilled and tested that would produce sufficient quantities of water to allow residential development in the northeastern corner to avoid crossing water lines through ESHA and/or ESHA buffers, would be located at least fifty (50) feet from the septic tank, and would be located at least one hundred (100) feet from the leach field; (4) that a new driveway meeting CAL FIRE standards must be constructed in the northeastern corner; (5) that a new encroachment permit be obtained from Caltrans to allow a connection to SR 1 in the northeastern corner; and (6) that tree removal and grading occur to accommodate development in the northeastern corner.

Additionally, the options described above would interfere with the investment-backed expectations of the property owner because they would eliminate the possibility of developing the western portion of the lot. As noted in a letter from the Coastal Commission, CDP 1-81-85 became vested in 1988 due to the installation of the septic system in 1983. This CDP authorized the construction of a residence in the western portion of the property. Therefore, the property owner would have expected that a residence of the same design, size, and location as that approved by CDP 1-81-85 could be constructed in the western portion of the property without obtaining a new CDP and therefore without the application of ESHA regulations. Though perhaps improperly, the County issued a building permit in 2019 that allowed trenching in the location of the existing unpermitted driveway to bring electricity to the western well. That building permit was finalized in 2021. Therefore, the property owner would have expected to have the ability to build within the western portion of the property due to County approval of the electrical trenching. If the County were to require that development occur only within the northeastern corner of the site or otherwise prevent access to the western portion, the vested right to develop in the western portion would be eliminated.

In this case, the regulation does not affect existing or traditional use of the property, and the government is not acquiring resources to facilitate uniquely public functions. The County's interest in the regulation is legitimate as a means to protect the delicately balanced Coastal Zone ecosystem and to prevent its destruction. However, in this case the County's interest would become unreasonable if the owner's vested rights were interfered with, particularly because the damage to the wetland has already occurred and the impacts can be sufficiently ameliorated by implementation of the RMMP and restricting further degradation. Due to the significant economic impact of the regulation on the owner, restricting development to the northeastern corner of the property would not allow the owner to obtain a reasonable return on investment and would not provide the owner with other benefits or rights that would mitigate those financial burdens. The regulation would not necessarily prevent the best use of the land if residential development were

feasible within the northeastern corner. If the County were to restrict development to the northeastern corner of the property, it would do so as a condition of the granting of this CDP. Therefore, the options described above are likely to result in a regulatory taking under the *Penn Central* and/or *Kavanau* tests. As such, existing access to the western portion of the property should be preserved.

Nevertheless, the County may impose conditions that would maximize consistency with the LCP while simultaneously avoiding a taking. The implementation of the biologist's recommendations in addition to the RMMP as authorized by the RWQCB would allow mitigation of the wetlands lost due to driveway construction while simultaneously allowing the western portion of the property to be developed.

**ENVIRONMENTAL DETERMINATION:** An Initial Study for the proposed project was completed by staff in accordance with the California Environmental Quality Act (CEQA). Based on this initial evaluation, it was found that the Project would not produce any significant environmental impacts with mitigation incorporated. As such, a Mitigated Negative Declaration was prepared. It is noted in the Initial Study that the proposed project could result in some environmental impacts, but these were considered less-than-significant with mitigation incorporated.

## **PROJECT FINDINGS & CONDITIONS OF APPROVAL**

Staff recommends, pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, that the Coastal Permit Administrator approve the proposed project, adopts a Mitigated Negative Declaration, and adopt the following findings and conditions.

### FINDINGS:

- 1. Pursuant to MCC Section 20.532.095(A)(1), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; and mitigation of impacts to wetlands due to the development of the unpermitted driveway, if developed outside of ESHA and/or ESHA buffers, is in conformity with the certified local coastal program (LCP) with the exception of the after-the-fact permitting of the driveway, which is inconsistent with the LCP because it would authorize development within a wetland ESHA and/or ESHA buffers. However, denial or relocation of this driveway and the resulting restriction of development to the northeastern corner of the property would constitute a regulatory taking as described in the Takings Analysis section of the staff report. Therefore, after-the-fact permitting and preservation of access to the western portion of the property must occur to avoid a taking despite this inconsistency. However, conditions of approval have been adopted that would maximize consistency with the LCP and the proposed development, as amended, would be the least environmentally damaging feasible alternative; and
- 2. Pursuant to MCC Section 20.532.095(A)(2), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway will be provided with adequate utilities, access roads, drainage, and other necessary facilities. Access to the proposed structures would be provided by the existing gravel driveway. The dwellings would be served by adequate water supply and septic capacity by a well and water storage tanks that supply about one and three tenths (1.3) gallons per minute supplemented by more than two thousand five hundred (2,500) gallons of storage capacity and a septic system designed for three (3) bedrooms, the same as proposed. Electrical service exists at a subpanel near the site of proposed dwellings; and
- 3. Pursuant to MCC Section 20.532.095(A)(3), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway is consistent with the purpose and intent of the zoning district applicable to the property, as well as the provisions of this Division and preserve the integrity of the zoning district. The proposed development is composed of principal permitted uses and accessory uses. Possible locations for the residential uses are constrained by other regulations such as ESHA

buffers and setbacks from the bluff edge. Potential agricultural uses of the property are similarly constrained. According to the state's Farmland Mapping and Monitoring Program (FMMP), the existing vegetation on the property is suited to the grazing of livestock. After accounting for undevelopable areas, the amount of potential pastureland on the property is very low. Residential use is appropriate; and

- 4. Pursuant to MCC Section 20.532.095(A)(4), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway, if completed in compliance with the conditions of approval, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act. An Initial Study for the proposed project was completed by staff in accordance with the California Environmental Quality Act (CEQA). Based on this initial evaluation, it was found that the Project would not produce any significant environmental impacts with mitigation incorporated. As such, a Mitigated Negative Declaration was prepared. It is noted in the Initial Study that the proposed project could result in some environmental impacts, but these were considered less-than-significant with mitigation incorporated; and
- 5. Pursuant to MCC Section 20.532.095(A)(5), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway will not have any adverse impacts on any known archaeological or paleontological resource. On September 4, 2024, the Northwest Information Center at Sonoma State University (NWIC) noted that a 2005 archaeological study covering 100% of the project area identified no cultural resources. NWIC recommended that local Native American tribes be contacted regarding the project. NWIC noted that the site has a low possibility of containing unrecorded archaeological sites and that no further study is recommended. The Mendocino County Archaeological Commission discussed the project at their meeting on June 12, 2024. The Commission determined that the existing survey was adequate and added the 'discovery clause' as a recommended condition. The 'discovery clause' has been incorporated as a recommended condition of approval for this CDP; and
- 6. Pursuant to MCC Section 20.532.095(A)(6), other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway. The site is accessed directly from State Route 1. The effects of residential development on public roadway capacity, including the construction of an ADU, were contemplated when the Rural Residential classification was assigned to the site and when the ADU amendments to the LCP were adopted. Caltrans did not respond to the referral request for the project. Solid waste generated by the project could be taken to a nearby transfer station, which would then transport the waste to the Potrero Hills landfill in Solano County; and
- 7. Pursuant to MCC Section 20.532.095(B)(1), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act and the Coastal Element of the General Plan. Existing public access is located along the southern and western property boundaries in the form of a vertical and lateral public access easement managed by the Mendocino Land Trust. The proposed development would not interfere with access because it would not physically block access through the easement or place development between the easement and the bluff face; and
- 8. Pursuant to MCC Section 20.532.100(A)(1)(a), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway will not significantly degrade identified ESHA resources. No further impacts to ESHA resources would occur and implementation of the RMMP would create

new wetland ESHA areas. The biological report prepared for the project concluded that "the potential effects on presumed ESHA, specifically the presumed wetland, can be significantly reduced or entirely circumvented by adopting the mitigation strategies outlined"; and

- 9. Pursuant to MCC Section 20.532.100(A)(1)(b), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway is the least environmentally damaging feasible alternative. The *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* report notes that the "positioning of the driveway, crucial for connecting the Shoreline Highway with the proposed residence, does not allow for relocation elsewhere on the property without compromising ecological integrity". The alternative of locating development in the northeastern corner of the property is not feasible due to the significant financial burden and other regulatory constraints placed upon the applicant, such as the construction of entirely new infrastructure and setbacks that limit the buildable area; and
- 10. Pursuant to MCC Section 20.532.100(A)(1)(c), the proposed development to construct a single-family residence, landscaped berm, Accessory Dwelling Unit, storage shed; improvements to existing fencing; drilling a new well; after-the-fact permitting of a driveway; and mitigation of impacts to wetlands due to the development of the unpermitted driveway incorporates all feasible mitigation measures capable of reducing or eliminating project related impacts. The project would mitigate previously unpermitted fill of wetlands by implementing the RMMP approved by the RWQCB and would avoid or minimize other impacts through the adoption of conditions of approval recommended by the biologist; and

### CONDITIONS OF APPROVAL AND MITIGATION MEASURES (as indicated by "\*\*"):

- 1. This action shall become final on the 11th day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall become effective after the ten (10) working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and/or use of the property in reliance on such permit has been initiated prior to its expiration. Such permit vesting shall include approved permits associated with this project (i.e. building permits, septic permits, well permits, etc.) and physical construction in reliance of such permits, or a business license demonstrating establishment of a use proposed under this project.
- 2. The use and occupancy of the premises shall be established and maintained in conformance with the provisions of Division II of Title 20 of the Mendocino County Code.
- 3. To remain valid, progress towards completion of the project must be continuous. The Applicants have sole responsibility for renewing this application before the expiration date. The County will not provide a notice prior to the expiration date.
- 4. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.
- 5. This permit shall be subject to the securing of all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.
- 6. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:
  - a. The permit was obtained or extended by fraud.
  - b. One or more of the conditions upon which the permit was granted have been violated.

- c. The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.
- d. A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.
- 7. This permit is issued without a legal determination having been made upon the number, size or shape of parcels encompassed within the permit described boundaries. Should, at any time, a legal determination be made that the number, size or shape of parcels within the permit described boundaries are different than that which is legally required by this permit, this permit shall become null and void.
- 8. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the property owner shall cease and desist from all further excavation and disturbances within 100 feet of the discovery and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.
- 9. Conditions approving this Coastal Development Permit shall be attached to or printed on any building permit application and shall be a part of on-site construction drawings.
- 10. The development authorized by this Coastal Development Permit includes only (1) the construction of a single-family residence, (2) the creation of a landscaped berm/knoll surrounding the residence, (3) the creation of a berm separating the residence and existing parking area, (4) portions of a water catchment area outside of any ESHA and/or ESHA buffers, (5) the construction of an ADU with an attached garage, (6) the construction of a storage shed, (7) repairs and improvements to existing fencing only in areas outside of ESHA and/or ESHA buffers, (8) the drilling of one (1) test well and conveyance of water lines only outside of ESHA and/or ESHA buffers, (9) a new entry gate only outside ESHA and/or ESHA buffers, (9) a new entry gate only outside ESHA and/or ESHA buffers, (11) after-the-fact permitting of an existing driveway, and (12) mitigation of impacts to wetlands due to the development of the previously unpermitted driveway, including implementation of the RMMP.
- 11. To ensure that development will not overlap ESHA and/or ESHA buffers, the permittee shall submit a revised plot plan to Planning & Building Services prior to the issuance of any building permit associated with the project, which shall show the following:
  - a. The location of the identified wetland ESHA, one hundred (100) foot buffer, fifty (50) foot buffer. The site plan shall show that all proposed development will be located outside of the ESHA and buffer areas. Excluding after-the-fact permitting of the existing driveway, any development that cannot be located outside of ESHA and/or ESHA buffers shall be removed from the revised plot plan. The revised site plan shall be transmitted to CDFW. If CDFW authorizes a reduced fifty (50) foot buffer at that time, the site plan may again be revised and submitted to show that proposed development would not encroach upon the fifty (50) foot buffer rather than the one hundred (100) foot buffer.
  - b. The location of the proposed newly created wetlands, including additional ESHA buffer areas that would extend one hundred (100) and fifty (50) feet from the newly created wetlands.
  - c. The location of low symbolic fencing. Low symbolic fencing should be placed along the edges of the portions of the driveway which encroach upon ESHA and/or ESHA buffers and the areas where proposed development abuts ESHA buffers. This includes area north of the proposed single-family residence and west of the proposed shed.
  - d. Any hedges or other landscaped barriers between development areas and ESHA buffers.

- 12. <u>Prior to the issuance of a building permit</u>, a deed restriction, approved by the County, shall be recorded with the County Recorder's office, which shall include:
  - a. The prohibition on the use of any dwelling for transient habitation.
  - b. For ADUs or JADUs proposed within one hundred twenty-five (125) feet of the bluff edge that require the construction of a new structure, result in the expansion of an existing structure, or require repair or improvements to an existing structure to the extent that it constitutes a replacement structure pursuant to section 13252 of Title 14, California Administrative Code, a prohibition on the development of bluff or shoreline protective devices to protect the ADU or JADU from bluff retreat, erosion, or other coastal hazards in the future.
  - c. A map exhibit showing the locations of identified ESHA and ESHA buffers on the property.
  - d. That future use of the property within the identified ESHA shall be permanently restricted to open space. Any future use of the property within the identified ESHA buffer areas shall be limited to those uses allowed within ESHA and/or ESHA buffers as outlined in Coastal Zoning Code Section 20.496.025. No future development, as defined in Coastal Zoning Code Section 20.308.035(D), shall occur within ESHA buffer areas without the issuance of a Coastal Development Permit amendment or a subsequent Coastal Development Permit.

The deed restriction shall run with the land, and be binding upon any future owners, heirs, or assigns.

- 13. In accordance with MCC Chapter 20.492, the following standards shall be applied to the proposed development:
  - a. Essential grading shall complement the natural landforms. At the intersection of a manufactured cut or fill slope and a natural slope, a gradual transition or rounding of contours shall be provided.
  - b. The permanently exposed faces of earth cuts and fills shall be stabilized and revegetated, or otherwise protected from erosion.
  - c. The area of soil to be disturbed at any one time and the duration of its exposure shall be limited. Erosion and sediment control measures shall be installed as soon as possible following the disturbance of the soils. Construction equipment shall be limited to the actual area to be disturbed according to the approved development plans.
  - d. Existing vegetation shall be maintained on the construction site to the maximum extent feasible. Trees shall be protected from damage by proper grading techniques.
  - e. Areas of disturbed soil shall be reseeded and covered with vegetation as soon as possible after disturbance, but no less than one hundred (100) percent coverage in ninety (90) days after seeding; mulches may be used to cover ground areas temporarily. In environmentally sensitive habitat areas, the revegetation shall be achieved with native vegetation. In buffer areas adjacent to environmentally sensitive habitats, non-native vegetation may be used if it is non-invasive and would not adversely affect the environmentally sensitive habitat area.
  - f. Sediment basins (e.g., debris basins, desilting basins, or silt traps) shall be installed in conjunction with initial grading operations and maintained through the development/construction process to remove sediment from runoff wastes that may drain from land undergoing development to environmentally sensitive areas.
  - g. To prevent sedimentation of off-site areas, vegetation shall be maintained to the maximum extent possible on the development site. Where necessarily removed during construction, native vegetation shall be replanted to help control sedimentation.

- h. Retention facilities and drainage structures shall, where possible, use natural topography and natural vegetation. In other situations, planted trees and vegetation such as shrubs and permanent ground cover shall be maintained by the owner.
- i. The release rate of storm water from all developments that drains into wetlands shall not exceed the rate of storm water runoff from the area in its natural or undeveloped state for all intensities and durations of rainfall. The carrying capacity of the channel directly downstream must be considered in determining the amount of the release.
- j. To prevent erosion, storm water runoff and drainage shall be directed away from the bluff face.
- 14. In accordance with Mendocino County Code Section 20.500.020(B)(2), and landscaping and vegetation located within the forty-eight (48) foot bluff setback shall be drought tolerant.
- 15. The proposed development shall conform to the standards required by CAL FIRE State Fire Safe Regulations Conditions of Approval Number 114-22, including the Driveway Standard, Address Standard, and Maintain Defensible Space and Fuels Modification Standard.
- 16. Per Mendocino County Code Section 20.504.035, the proposed development shall comply with the following standards:
  - a. No light or light standard shall be erected in a manner that exceeds either the height limit designated in this Division for the zoning district in which the light is located or the height of the closest building on the subject property whichever is the lesser.
  - b. Where possible, all lights, whether installed for security, safety or landscape design purposes, shall be shielded or shall be positioned in a manner that will not shine light or allow light glare to exceed the boundaries of the parcel on which it is placed.
  - c. Security lighting and flood lighting for occasional and/or emergency use shall be permitted in all areas.
  - d. Minor additions to existing night lighting for safety purposes shall be exempt from a coastal development permit.
  - e. No lights shall be installed so that they distract motorists.
- 17. \*\*In accordance with the *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* report, the following mitigation measures shall be implemented to avoid or minimize potential impacts to birds, amphibians, and insects:
  - a. Should active native bird nests be found, activities like vegetation removal or construction that could disturb nesting shall be prohibited within a one hundred (100) foot buffer zone, adjustable based on species, habitat and disturbance levels by a qualified biologist. The buffer zone must be maintained until the fledglings are independent. If an active nest is present, a qualified biologist shall monitor the nest site weekly during the breeding season to confirm the buffer's effectiveness in preventing disturbances. If active bird nests are found, the California Department of Fish & Wildlife shall also be contacted to coordinate future actions.
  - b. To reduce noise disturbance and the need for artificial lighting, construction activities shall be confined to daylight hours.
  - c. Within two (2) weeks of the commencement of construction, contractors shall undergo training led by a qualified biologist on recognizing amphibians and insects native to the Mendocino coast, including the California red-legged frog (*Rana draytonii*) The training

shall cover distinguishing between species of special concern and more common species, along with the necessary steps and communication protocols if species of special concern are encountered.

- d. At the start of each day and before initiating ground-disturbing work, crews shall conduct visual inspections of the area to identify any species of special concern or common animals present.
- e. When removing construction debris and handling wood stockpiles, materials should be moved carefully by hand to prevent harming amphibians.
- f. Construction shall pause for forty-eight (48) hours following a rain event to protect the habitat during wet conditions. After this period, a trained crew member shall inspect the area for any species of special concern before resuming work.
- 18. \*\*The permittee shall implement the *Revised Restoration and Mitigation Monitoring Plan (RMMP)* prepared for the project, including the following measures:
  - a. The permittee shall use the Annual Monitoring Report template within the RMMP to biannually observe and record the conditions of the wetland and surrounding areas. The property owner will utilize a combination of visual inspections, photographic records, and biological surveys to detect any invasive species or ecological changes and record the outlined metrics. Based on this monitoring schedule, a consulting biologist will prepare an annual report each year to summarize these metrics and will make necessary adjustments to planning strategies and/or management practices based on annual performance to ensure ongoing success. A response plan to manage invasive species will be implemented promptly as they are detected, including physical removal. The sizing of the existing culverts will be checked annually to omit any risk of plugging and potential crossing failure, and fine sediment discharge. No chemical treatment will be performed. Invasive species will be manually removed.
  - b. After 2 years of monitoring, cover of wetland species should be >60% and increase by 2-5% yearly until the goal of 80% within the restoration area is reached by the end of the monitoring period (i.e., 5 years). In addition, the area covered by other non-invasive species will be reduced to <10%.</p>

The following list of wetland species will be established, based on actual plant observations in the *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* dated August 11, 2024:

- Horsetail (*Equisetum telemateia* and *Equisetum arvense*, which was observed at Sampling Point SP05 close in proximity to the new wetland)
- Yarrow (Achillea millefolium, which was observed at SP05)
- Toad rush (Juncus bufonius, which was observed at SP05)
- Rushes (*Juncus* spp, which was observed by the Regional Water Control Board near SP02)
- Slough sedge (*Carex obnupta*)
- Pacific reedgrass (Calamagrostis nutkaensis)

The planting will be a mix of seeds of the aforementioned native plants.

c. After 5 years of monitoring, cover of wetland species should be >80% and cover of noninvasive species should be reduced to <10%. A wetland delineation will be conducted at the end of the 5 years to determine that 0.122 acres of wetlands have been created. A qualified restoration ecologist will assist the wetland construction and monitoring efforts through plant identification, their wetland mitigation expertise, and assessing the resulting new wetland delineation after 5 years.

- d. Data will be collected from regular monitoring to identify trends or issues that may require intervention. The property owner is prepared to adjust restoration techniques, plant species selection, or management practices based on observed data and external factors like climatic changes. The property owner has also started to implement physical barriers (hedge) to protect sensitive areas from human disturbances.
- e. The North Coast Regional Water Quality Control Board and the County of Mendocino Department of Planning and Building Services will be kept informed of project progress through updates and consultation meetings. The property owner ensures all construction and restoration activities comply with relevant permits and regulations. Monitoring reports will be sent in annually to <u>NorthCoast@waterboards.ca.gov</u> and the Department of Planning & Building Services. At the end of five years, a comprehensive review of the project's success against these criteria will be conducted and reported to the project stakeholders (i.e., Regional Water Control Board).
- f. The property owner shall maintain detailed records of all restoration mitigation, planting, monitoring, and management activities, and shall submit regular reports to the appropriate agencies, detailing progress, compliance with permits, and any challenges faced.
- g. Transects or plots should be used to measure cover during the monitoring and reporting period.
- 19. \*\*In accordance with the *Biological Scoping Survey, Wetland Delineations, & Botanical Surveys* report, the following mitigation measures shall be in addition to the requirements of the RMMP to further protect and restore wetland ESHA:
  - a. All construction materials and vehicles shall be positioned in upland areas and shall maintain a distance of over one hundred (100) feet from all ESHA.
  - b. Best Management Practices (BMPs) shall be applied to reduce erosion from construction. Ground disturbance shall be limited and disturbed areas shall be stabilized promptly using native seeds or biodegradable materials.
  - c. Invasive species shall not be planted. Only non-invasive, native vegetation shall be planted. Some invasive plants commonly found on the Mendocino coast that should be avoided include: Iceplant (*Carpobrotus edulis, C. chiloensis, & Delosperma sp.*), cotoneaster (*Cotoneaster franchetii & C. pannosus*), English holly (*Ilex aquifolium*), English ivy (*Hedera helix*), cape ivy (*Delairea odorata*), pampas grass (*Cortaderia jubata & C. selloana*), cape weed (*Arctotheca calendula & A. prostrata*), montbretia (*Crocosmia sp.*), redhot poker (*Kniphofia uvaria*), periwinkle (*Vinca major*), bulbil bugle lily (*Watsonia meriana*), and callalily (*Zantedeschia aethiopica*).
  - d. The property owner shall continue to remove non-native Pinus radiata and replace it with Pinus muricata. The creation of open space will also allow natural recruitment of native species. Active removal of targeted invasive species shall continue, with particular emphasis on CAL-IPC (California Invasive Plant Council) listed species including: *Bromus spp., Cirsium vulgare, Cirsium arvenses, and Digitalis purpurea.*
- 20. This entitlement does not become effective or operative and no work shall be commenced under this entitlement until the California Department of Fish and Wildlife filing fees required or authorized by Section 711.4 of the Fish and Game Code are submitted to the Mendocino County Department of Planning and Building Services. Said fee of \$3,018.75 or current fee shall be made payable to the Mendocino County Clerk and submitted to the Department of Planning and Building Services within five (5) days of the end of any appeal period. Any waiver of the fee shall be on a form issued by the Department of Fish and Wildlife upon their finding that the Project has "no effect" on the environment. If the Project is appealed, the payment will be held by the Department of Planning and Building Services

until the appeal is decided. Depending on the outcome of the appeal, the payment will either be filed with the County Clerk (if the Project is approved) or returned to the payer (if the Project is denied). Failure to pay this fee by the specified deadline shall result in the entitlement becoming null and void. The applicant has the sole responsibility to ensure timely compliance with this condition.

- 21. \*\*To prevent the accidental discharge or invasive plant seeds or other materials, any heavy equipment vehicles entering or leaving the site shall be cleaned offsite.
- 22. \*\*Future development or maintenance of the eastern watercourse and its culvert is subject to notification to California Department of Fish and Wildlife under Fish and Game code section 1600 in addition to permitting by the Regional Water Quality Control Board.
- 23. \*\*Construction should occur outside of bat pupping season (from June to August). If these activities cannot be done in the non-pupping season, a qualified biologist shall perform preconstruction surveys within 14 days of the onset of ground disturbing impacts or clearing of vegetation. If active roost sites are observed, no ground disturbance activities shall occur within a minimum 100-foot exclusion zone. These exclusion zones may vary depending on species, habitat and level of disturbance. The exclusion zone shall remain in place around the active nest until all young are no longer dependent upon the roost. A biologist should monitor the nest site weekly during the breeding season to ensure the buffer is sufficient to protect the nest site from potential disturbances. As with birds, bat roost and hibernation sites can change from year to year, so pre-construction or demolition surveys are usually necessary to determine the presence or absence of bat roost sites in a given area. Pre-construction bat surveys do not need to be performed if ground disturbing work or vegetation removal is conducted between September 1 and October 31, after young have matured and prior to the bat hibernation period. However, if it is necessary to disturb potential bat roost sites between November 1 and August 31, preconstruction surveys should be conducted. Pre-construction bat surveys involve surveying trees, rock outcrops, and buildings subject to removal or demolition for evidence of bat use (guano accumulation, or acoustic or visual detections). If evidence of bat use is found, then biologists shall conduct acoustic surveys under appropriate conditions using an acoustic detector, to determine whether a site is occupied. If bats are found, a minimum 50-foot buffer should be implemented around the roost tree. Removal of roost trees should occur in September and October, or after the bats have left the roost.
- 24. \*\*All fencing including that proposed along the coastal access trail shall be of a wildlife-friendly design.
- 25. \*\*Any culinary plants and fruit trees, etc. shall be planted in designated areas where they cannot escape into the native natural communities onsite or result in competition to native species proposed to vegetate the landscaped berm. Culinary herbs should be established separately from the native vegetation that is proposed to vegetate the berm.
- 26. \*\*The berm's planting palette shall consist of locally native species. Yellow bush lupine is not a locally native species and may be a problematic species. The California Native Plant Society Dorothy King Young chapter recommends not planting yellow bush lupine. More information can be found at this link: <a href="https://www.dkycnps.org/">https://www.dkycnps.org/</a>.
- 27. \*\*Invasive species shall be targeted for removal property-wide for a period of no less than ten (10) years. If non-native trees including Monterey pines are removed, they shall be replaced with locally appropriate, native species. Non-native trees and shrubs that have been planted along the driveway should be removed.
- 28. \*\*To reduce potential for incidental encroachment into ESHA and ESHA buffers, the applicant shall install low symbolic fencing at the outside edge of ESAH buffers and where development occurs within ESHA and/or ESHA buffers. The fencing shall be installed at the edge of development including along the edge of the driveway.

- 28. \*\*To reduce potential for incidental encroachment into ESHA and ESHA buffers, the applicant shall install low symbolic fencing at the outside edge of ESAH buffers and where development occurs within ESHA and/or ESHA buffers. The fencing shall be installed at the edge of development including along the edge of the driveway.
- 29. \*\*The RMMP Annual Monitoring Report should be amended to include all of the wildlife species identified within the Biological Scoping Survey, Wetland Delineations, & Botanical Surveys that have a "High Potential" to occur in the study area within the "targeted wildlife species", including the Obscure bumble bee, Western bumble bee, Townsend's big-eared bat, White-tailed kite, Lotis blue butterfly, Northern red-legged frog, California red-legged frog, and Behren's silverspot butterfly.

LIAM CROWLEY

Appeal Period: 10 Days Appeal Fee: \$2,674.00

#### ATTACHMENTS:

- A. Location
- B. Aerial Imagery (Vicinity)
- C. Aerial Imagery (Detail)
- D. Historical Aerial Imagery
- E. Topographic Map
- F. Plot Plan
- G. Floor Plans & Elevations
- H. Zoning
- I. General Plan J. LCP Land Use Map 19: Navarro
- K. LCP Land Capabilities & Natural Hazards
- L. LCP Habitats & Resources
- M. Post LCP Certification & Appeal Jurisdiction
- N. Adjacent Parcels
- O. Fire Hazard Zones & Responsibility Areas
- P. Flood & Tsunami Zones
- Q. Wetlands
- R. Coastal Ground Water Resources
- S. Highly Scenic & Tree Removal Zones
- T. Estimated Slope

U. Western Soil Classifications

PLANNER II

- V. Williamson Act
- W. Important Farmlands
- X. Water District
- Y. Landscaping Notes
- Z. Design Note
- AA. State Fire Safe Regulations Conditions of Approval
- **BB. Septic Permit**
- CC. Well Test
- DD. Building Permit Application BF\_2019-0593
- EE. RWQCB Inspection Memo
- FF. RWQCB Notice of Violation
- GG. Approved RMMP
- HH.RWQCB 401 Permit Application
- II. Biological Scoping Survey, Wetland Delineations, & Botanical Surveys (ON LINE ONLY)
- JJ. Geotechnical Investigation (ON LINE ONLY) KK. CDFW Comments (ON LINE ONL)

### MITIGATED NEGATIVE DECLARATION AND INITIAL STUDY AVAILABLE ONLINE AT:

https://www.mendocinocounty.gov/departments/planning-building-services/boards-andcommissions/public-hearing-bodies-page-2















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- 6. Surfaces located on the northern and eastern elevations are not highly reflective.
- The foundation plan shall indicate the lowering of the foundation four feet 7. below the existing grade at the development site.

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MAIN HOUSE Residential \*Height from existing ground level

12

**A02** 

SHEET NUMBER:

14/10/2022 DC DT

02 OF 03

2,000

15

18'-11 1/2"

14

1



## NOTES:

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- Garage & studio FFL =  $\pm$  0'0" is equal to elevation 164'-6" 1
- Storage shed FFL =  $\pm$  0'0" is equal to elevation 205' 2.
- The discharge of pollutants to any storm drainage system is prohibited. No solid waste, petroleum byproducts, soil particulate, construction waste materials, or wastewater generated on construction sites or by construction activities shall be placed, conveyed or discharged into the street, gutter or storm drain system.

1

- Berms are vegetated with natural grasses.
  Any nighttime lighting is of low intensity and directed towards the structure. All exterior lighting shall be downcast and shielded to prevent light and glare beyond the parcel boundaries.
- 6. Surfaces located on the northern and eastern elevations are not highly reflective.
- The foundation plan shall indicate the lowering of the foundation four feet 7. below the existing grade at the development site.

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06 STORAGE SHED SECTION 03 SCALE: 1/8"=1'

STORAGE SHED (UNCONDITIONED SPACE)

-19'-4" -----

STORAGE SHED  $FFL=\pm0'-0''$ 



12

	OCCUPANCY CLASSIFICATION	STORIES	MAX HEIGHT*	CONDITIONED AREA (sqf)	UNCONDITIONED AREA (sqf)
BUILT					
MAIN HOUSE	Residential	1	18'-11 1/2"	2.000	
GARAGE & STUDIO	Residential	2	17'-11"	744	260
				2.744	26

13

14

15

SPARANO + MOONEY ARCHITECTURE
PROJECT TITLE:
REIMANN-SCHILK RESIDENCE
SITE: 2300 N HIGHWAY 1. ALBION. CA 954
CLIENT:
MARTIN REIMANN OLIVER SCHILKE
CONTENT: GARAGE & STUDIO STORAGE SHED PLANS SECTIONS
ISSUED FOR: NEW PERMIT APPLICATION
FILENAME: ALBH-NEW-PERMIT.dwg

DESIGN ARCHITECT

ELEMENTAL

16

# VERS DATE STAGE CHK 14/03/2024 DC DT 06/01/2024 DC DT 14/10/2022 DC DT SHEET NUMBER: 03 OF 03

**A03** 

UNCONDITIONED AREA: 490sqf		
6x6" P(	DST @4'	03/A03
	WALL- WALL- U U U U U U U U U U U U U U U U U U	-MOUNTED LIGHT
AGE SHED + 0'-0" 1/8"=1'		

DATE: 14/03/2024 SCALE: 1/8" = 1' REV: D SIZE: ARCH D

17





































March 2024

Reimann-Schilke Residence, Albion, CA LANDSCAPING NOTES

### OVERVIEW

The following landscaping notes are intended to support and complement the Coastal Development Permit (CDP) Amendment Application No. CDP 1-81-085-A2 submitted by the Owners, by providing further information on the landscaped areas of the project, such as proposed interventions, proposed planting types and species and areas to be retained without intervention. Additionally, the notes include a description of the proposed fences. All these notes and proposals are aimed at complying with the applicable policies regarding fencing, approved species for planting and general landscaping works in the property.

### OBJECTIVES

The general landscaping approach for this project seeks to minimize the interventions to those required for both accessing and maintaining the different areas of the property as well as creating usable areas around the main house. These interventions seek to conform with policies related to minimizing impact of new construction on the views from Highway 1 towards the Ocean.

Some of the strategies and interventions considered are:

- Limiting height of cuts and fills to avoid major civil works in the landscaped terraces around the main house.
- Using species compatible with the local habitat, as per list of recommended species, including the use of drought-tolerant species where required.
- Creation of planted berms and setting of the main house in a way that that is partially blocked from views from Highway 1.
- Repairing and raising of fence along the south property line for increased privacy to the public trail.
- Repairing and lowering of the fence along the ocean side of the property to reduce obstruction of views.

The plan attached to this document includes notes on the types of interventions. Areas not marked in the plan are intended to retain existing vegetation and landforms.

### ELEMENTAL

SPARANO+MOONEY A R C H I T E C T U R E

### PLAN INDICATING LOCATION OF LANDSCAPING NOTES





### ABOUT FENCING

1. Between points A and B in plan, there is an existing fence that defines the bluff trail separating it from the rest of the property. The proposal considers repairing and lowering this fence to approximately 12-14" to reduce the blocking of views towards the ocean.



2. Between points B and C in plan, the fence separates the property from the trail along the neighboring plot. The proposal considers repairing and raising this fence to 6ft, to provide privacy to the main residence.



### ELEMENTAL SPARANO+MOONEY ARCHITECTURE

### ABOUT LANDSCAPING

Most of the site is left in its natural condition and preserving existing vegetation. Around the main house there is a circular area marked as landscaped. The purpose of the landscape area is two-fold. First, to create the horizontal terrace required to build the house and accommodate the interface between the house terrace and the natural slope of the site. Second, to create usable exterior areas around the house. A series of smaller terraces with heights between 2 and 3 feet allow to distribute the height difference between the house's flat terrace and the site's slope in smaller increments, minimizing the impact and volume of cuts, fills and major civil works.

Towards the south and southeast side, the terrace is cut not exceeding 4ft in height. These cuts allow to create a natural berm effect and hide part of the house façade. The top of the cut is planted with native vegetation to blend with what is already naturally growing on the site.











Towards the north and northwest, the terraces meet the natural terrain with a back fill not exceeding 3ft in height. The back fill slope follows the natural slope of the fill material and is stabilized with planting of species already growing on the site so that it blends more naturally.



The interior terraces are made from dry-set stone walls and are limited and vary in height, from half foot to 3 feet, hence not requiring any structural foundation. The flat terraces are planted with drought-tolerant grasses and ground cover.









### ELEMENTAL

SPARANO+MOONEY A R C H I T E C T U R E

### SELECTED SPECIES

### Medium Shrubs – Native plants

These species will be used on the exterior side of the circular area to help mark the border and plant berms and landforms to conceal the residence from the Highway and trail. These species should also blend well with existing vegetation.



Lupinus arboreus Yellow Bush Lupine



*Romneya coulteri* Matilija Poppy



Baccharis pilularis v. consanguinea Coyote Brush

### Options for base groundcovers

The terraces inside the circular area will be planted with drought-tolerant grasses native to the Northern West Coast. The purpose is to create a homogeneous base texture for different outdoor uses right next to the residence.



*Agrostis pallens* California Bentgrass



### Small Flowering Shrubs, Groundcovers – Culinary use

In addition to the base grasses in the terraces, patches of small flowering and scented plants for culinary use or medicinal purposes will be planted so that they are easily reachable from the main house.



Thymus sp. Thyme



Satureja douglasii Yerba Buena



Salvia sp. Sage

### ELEMENTAL



May, 2023

Reimann-Schilke Residence, Albion, CA **DESIGN NOTE** 

#### **OVERVIEW**

The following design note is intended to support and complement the Coastal Development Permit (CDP) Amendment Application No. CDP 1-81-085-A2 submitted by the Owners, by providing further information on how the project conforms to the visual resource protection policies of the Mendocino County LCP. Specifically, there has been a question on whether the proposed exterior materials described as "wood board formwork concrete cast-in-place" would be consistent with the aforementioned policies.

#### **RESIDENCE MATERIAL CONCEPT**

### **Project References**

In addition to selecting a setting for the residence that will protect the views towards the ocean and minimize the alteration of natural land forms, the material palette seemed a relevant aspect to allow the project to be visually compatible with the character of surrounding areas. As part of the early design studies, the Owners and the Architects set out to investigate the Mendocino County area for natural and architectural references that could inform the character of a contemporary design and relate it to the natural and vernacular architecture context of the site and surrounding areas.



Vernacular buildings in Mendocino

Consistent with the historical relevance of the Mendocino County in the wood industry, wood construction is typical of vernacular architecture, found both in residential and farm buildings. Weathered wood has the ability to tone down the natural color of wood and blend it with the environment, while also giving buildings a solid appearance. Natural weathering though, is difficult to control and is sometimes associated with derelict buildings. Complying with the purpose of the Mendocino County LCP regarding the protection of ocean scenic areas requires -in addition to all specific provisions in the code, a material that can blend and weather nicely, remaining structurally sound for a longer period.
# SPARANO+MOONEY

ARCHITECTURE

The proposed material for opaque walls is cast-in-place concrete. This material performs simultaneously as structural elements as well as surface finish. To achieve a wood siding finish effect, all exposed concrete surfaces will be board formed from rough sawn boards. The use of rough sawn lumber will ensure that the finished concrete surfaces will be highly textured as a result of accentuated wood grain patterning, knots and saw marks left in the concrete surface from the board formwork. It will not easily "read" as concrete but more like wood especially like the naturally weathered (grey) wood common in the Mendocino area.

The image below shows the result of this type of formwork construction in a previous project designed by ELEMENTAL. In addition to the texture provided by saw cut and wood grain, the concrete achieves different tonalities giving it a more natural look compared to synthetic or painted siding boards.



Rough-saw board form work concrete in a project by ELEMENTAL.

In addition to the texture of the concrete, surfaces formed in this way will promote the growth of lichen on many of them because the imperfection of the texture will hold very small amounts of moisture. This phenomenon will further promote the contextualization of the material in the Mendocino microclimate as lichen is prevalent on wood left to age outside in many locations in the area as well as rock used in construction and naturally occurring.



Mendocino and California coast lichen and groundcovers.





Project site bluff at sunset

External material palette (bottom-right, clockwise): Wood-board textured concrete, natural wood for window frames, downlighting (wall mounted and floor mounted for paths), vegetated berms.

The concrete design also looks into the coastal bluff and Mendocino coast rock formations as a reference of the material qualities and color that will help the project blend into its natural setting.

Finally, through the right selection of materials and construction methods, the proper landscaping including the construction of the required berms and, the right setting of the residence in the south area of the site close to a densely wooded area, the project ensures that the requirements and aims of the Mendocino LCP are satisfied.



GAVIN NEWSOM, GOVERNOR



### STATE FIRE SAFE REGULATIONS

CONDITIONS OF APPROVAL

Applicant Name:		Martin Reimann						
Project	t Addres	is:	2300	N. Hwy	1 1		And Appendix and Angels and	
City:	Albion			State:	Cali	fornia	Zip Code	: 95410
Review	v Date:	9/2	21/202	2		APN:	123-2900-3	00
CAL	FIRE #:		114-:	22		Buildi	ing Permit #:	Enter Permit Number

The CAL FIRE Mendocino Unit has reviewed this Building Permit application. Based upon the Unit's review, the following conditions shall be incorporated prior to approval of permit issuance as required by Title 14 of the California Code of Regulations, Division 1.5, Chapter 7, Sub-chapter 2, Article 1, §1270.03

### You must comply with the following marked (X) standards below to obtain FINAL CLEARANCE

### ROAD STANDARD §1273.01-§1273.06, §1273.08 - §1273.09

- All roads shall be constructed to provide two 10' traffic lanes, not including shoulder and striping.
- Roadway shall be designed and maintained to support 75,000lb and provide an aggregate base. Project applicant shall provide engineering specifications to support design if requested.
- The grades for all roads, streets, private lanes, and driveways shall not exceed 16%.
- No roadway shall have an inside radius curvature of less than 50' and additional width of 4'shall be added to curves of 50-100'.
- Turnarounds are required on driveways and dead-end roads. The minimum turning radius shall be 40 . feet not including parking. If a hammerhead "T" is used the top of the "T" shall be a minimum of 60' in length.
- Turnouts shall be a minimum of 12' wide by 30' long and 25' tapers on each end.
- All one-way roads shall provide a minimum 12' traffic lane, not including shoulders. All one-way roads shall connect to a two-lane road at both ends. In no case shall it exceed 2640' in length and a turnout shall be placed at the approximate mid-point.



### Maximum lengths for dead end roads:

- Parcels zoned less than 1 acre- 800'
- Parcels zoned 1-4.99 acres-1320'
- Parcels zoned 5-19.99 acres-2640'
- Parcels zoned 20 acres or larger- 5280'.
- Where parcels are zoned 5 acres or larger turnarounds shall be provided at maximum 1320' intervals.
- Each dead-end road shall have turn around constructed at its a terminus.

### DRIVEWAY STANDARD §1273.01(c), §1273.02(b), §1273.03, §1273.05, §1273.06, §1273.09

- Minimum 10' wide with 14' unobstructed horizontal clearance and 15' unobstructed vertical clearance.
- Driveway shall have an all-weather surface, with no more than 16% grade, and minimum 50' radius inside curvature on all turns.
- Driveways exceeding 150' but less than 800' require a turnout near the midpoint, driveways exceeding 800' shall provide turnouts no more than 400' apart. Turnout shall be a minimum of 12' wide, 30' long with 25' tapers on each end.
- A turnaround shall be provided to all building sites on driveways more than 300' in length and shall be within 50' of the building, a 40' radius turnaround or 60' hammerhead "T" shall be utilized.
- Gates shall be a minimum 14' wide, all gates providing access shall be located at least 30' from the roadway. Security gates shall have an approved means of emergency operation.

### □ ROADWAY STRUCTURE/BRIDGE STANDARD §1273.07

- All roadway structures shall be constructed to carry at least the maximum load and minimum vertical clearance as required by Vehicle Code Sections 35250, 35550, and 35750.
- The bridge shall be constructed and maintained in accordance with the American Association of State and Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.
- Vehicle load limits shall be posted at both entrances to bridges.
- A bridge with only one lane shall provide for unobstructed view from one end to the other with turnouts at both ends.



### SIGN STANDARD §1274.01- §1274.02

- Size of letters, numbers, and symbols for street and road signs shall be a minimum 4" letter height, ½" stroke, reflectorized, and contrasting with background color of sign. Visible from both directions of travel for at least 100'.
- Height of street and road signs shall be uniform county wide, newly constructed, or approved public and private roads must be identified by a name or number through a consistent countywide system. Signs shall be placed at the intersection of those roads, streets, or private lanes.
- A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead end road, one way road, or single lane conditions shall be placed at the intersection preceding the access limitation and no more than 100' before such access limitation.

### ADDRESS STANDARD §1274.03- §1274.04

- Address must be posted at beginning of construction and maintained thereafter.
- Minimum 4" letter height, ½" stroke, reflectorized with contrasting background, visible from both directions of travel.
- Multiple addresses on a single driveway shall be mounted on a single post.
- Address shall be placed at each driveway entrance
- EMERGENCY WATER STANDARD §1275.01- §1275.04 Not Required
  - Water systems equaling or exceeding the National Fire Protection Association (NFPA) 1142, 2012
     Edition and California Fire Code CCR 24 part 9, shall be accepted as meeting the requirements of this article.
  - The hydrant or fire valve shall be 18" above grade, 8' from flammable vegetation, no closer than 4' and no further than 12' from roadway, and in a location apparatus using it will not block the roadway.
  - The hydrant shall be not less than 50' nor more than ½ mile from the building it is to serve, shall be located at a turnout or turnaround along the driveway to that building or along a road that intersects with driveway.
  - The hydrant head shall be 2 ½" National Hose male thread with cap for pressure and gravity flow systems, and 4 ½" for draft systems. They shall have suitable crash protection.
  - A reflectorized blue marker minimum of 3" diameter shall be mounted on a fire-retardant post within 3' of the hydrant. The marker shall be no less than 3 'or more than 5' above grade.



### MAINTAIN DEFENSIBLE SPACE AND FUELS MODIFICATION STANDARD §1276.01- §1276.04

- All parcels shall provide a minimum 30' setback for al buildings from property lines and/ or the center of the road.
- Fuel modification and disposal of flammable vegetation and fuels caused by site development and construction, shall be completed prior to road construction or final inspection of building permit.
- Maintain defensible space 100' from each side and front and rear of the structure(s), but not beyond the property line. The intensity of fuels management may vary within the 100' perimeter of the structure, the most intense being within 30' of the structure.
- Remove that portion of a tree that extends within 10 feet of a chimney or stovepipe.
- Maintain a tree, shrub, or other plant adjacent to or overhanging a structure.
- Maintain the roof structure free of leaves, needles, or other vegetative materials.

□ EXCEPTION REQUEST GRANTED

See attached letter

☐ EXCEPTION REQUEST DENIED

See attached letter

```
Application Reviewed By:
```

Joey Howard, Battalion Chief Mendocino Unit

Please note that the comments noted above are based on a CAL FIRE State Fire Safe Regulation review only. There may be additional comments or information requested from other County Departments or Divisions reviewing this application submittal package. Should you have any questions, you may contact the CAL FIRE Mendocino Unit at (707) 459-7414 or email at Mendocino4290@fire.ca.gov.

For current State Fire Regulations, please visit https://govt.westlaw.com/calregs.

California Code of Regulations Title 14- Natural Resources Division 1.5- Department of Forestry Chapter 7- Fire Protection Subchapter 2- SRA/VHFHSZ Fire Safe Regulations

Page 4 of 4



Mendocino County Environmental Health 860 North Bush Street, Ukiah, CA 95482 120 West Fir Street, Fort Bragg, CA 95437 www.mendocinocounty.gov/eh enviroh@mendocinocounty.gov (707) 234-6625 / (707) 961-2714



### Operation Permit Non-Standard Sewage System Permit

Date Printed: October 17, 2023

Permit Number: ST25022

PERMIT ISSUED TO: MARTIN REIMANN/OLIVER SCHILKE 6353 W SWEETWATER DR TUCSON, AZ 85745 System Site Address and Assessor's Parcel Number: 2300 N HWY 1 ALBION, CA 95410 APN: 123-290-03

To be renewed on October 29, 2026 as per Mendocino County Code Section 16.08.090.

Construction permit finaled on October 29, 2021

Design Flow (gal/d)	1	Permit Type	Initial
Absorption Media	Gravel	Waste Strength	
Total Depth (in)	6	Septic Tank Volume (gal)	1000
Absorption Media Depth (in)	0	Tank Material	Concrete
Absorption Trench Width (in)	0		
Calculated Total Linear Feet		Calculated Surface Area (sq.ft)	

Non-Standard System Design Specifications				
Treatment Type	None	Dose Tank Volume (gal)	1200	
Treatment Unit Material		Dose Tank Material	Concrete	
Treatment Tank Volume	500	Pump Rate	5	
Treatment Process Capacity		Total Dynamic Head (ft)	121	
Treatment Area		Dose Tank Draw Down	Concrete	
Design Timer On	10.2	Dose Tank Diff		
Design Timer Off	135	Calculated Dose Volume (gal)	and the second	

Harlast

Marlayna Bourbonnais, EH Manager

# WEST WELL

# WATER STORAGE CAPACITY: 2×3,000 GALLONS = 6,000 GALLONS

#### MENDOCINO COUNTY **Environmental Health**

# Water Quantity Report SEALED WELL METHOD (NO WELL LOG AVAILABLE)

23

	Time	Elapsed Time	Total Time	Depth to H20	Draw down	Meter Reading	Total Gallons	GPM	GPM per FT
23	7:02 AM	0:00	0:00		200	0	0		R. R.
23	9:22 PM	14:20	14:20	)		1,651	1,651	1.92	-
5	7:09 PM	21:31	60:07			1,688	3,339	1.31	
							<u> </u>	<u>19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -</u>	2.48
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-			1022 3 2	1000			Protection and	all south	1981.25

Show calculations for volume of the developed well in Gallons per Foot:

### I CERTIFY THAT THE WELL IS, IN MY OPINION, INDICATIVE OF WATER FEASIBILITY ON THE DIVISION.

I certify the test was carried out by the procedures specified by the Mendocino County Division of Environmental Health. I declare under penalty of perjury that the foregoing is true and correct.

Sha Signed:

P:\Report Format\WaterQuantity-Form#26-05 Rev-11-2006.doc

Revised November 2006

Image: Second	Planning and Bu BUILDING F Coustad Only property owners,	ilding Services PERMIT AP MM	PLICATION Definition of the second s	BF-2019- Permit # 0593 Accepted By: <u>MARK</u> Date: <u>7/10/19</u> (Office Use Only) ation may obtain permits. IRIAL
Project Address: 23DD N. HWY 1       APN 123-290-03         Driving Directions: Past Nonella Lane on right         Complete scope of work: Trenching, to burry undergrouted electrical cable for the primary and formation;         Residential         Existing       Proposed         Ining Area       office         Deck       office         Porch       office         Carage/Storage       office         Deck       office         Office       office         Offic	1       2.       New         2.       Single Family       Mobile Home         3.       Single Family       Mobile Home         2.       2.4 Unit Residential       Manufactured         3.       5.4 Unit Residential       Modular         3.       5.4 Unit Residential       Modular         3.       Second Residence       Foundation Only	Addition	Remodel/Replace     Demoli       Window Change     Reroof w/Sheathin       Swimming Pool     Photovoltaic       Siding     Mechanical       Reroof     Plumbing	ition ng 🕅 Electrical 🗌 Other: Class K Ag Exempt Occupancy Change
Driving Directions:       Past Nonella Lane on right         complete scope of work:       Tren ching, to burry underground elections:         Two wells j well #1 has cubret & cell#1 past.         Wing Area         Besidential         Carage Storage         Deck         Porch         Storage         The additional strial         Other:         Statial         Garage/Storage         Other:         Statial         Other:         Statial	Project Address: 2300 N. H	WY 1		APN: 123-290-03
Complete scope of work: Trem ching, to burry underground elechical cable for the plant Valuation: s         Complete scope of work: Trem ching, to burry underground elechical cable for the plant Valuation: s         Residential         Existing       Proposed         Garage/Storage       st         Deck       st         Porch       st         Complete scope of work: Trem ching, to burry underground of the plant of	Driving Directions: Past Nonell	a Lane	on right	
Existing       Proposed         Residential	Complete scope of work: Trenchin two wells; well #1	g to burry has subfee	underground ele a & well # 2 pane	Maluation:
Applicant Information: Please check the appropriate box for the primary contact         X PROPERTY OWNER       AGENT         CONTRACTOR         Y OWNER/BUILDER? *Proof of Ownership will be required         Property Owner Name:       Martin Reimann         Address:       6353         W Sweetwater       Dr., Tacson, Arintona         Address:       Email:         Martin       Phone:         Email:       Email:         Address:       Phone:         Email:       Email:         Address:       Phone:         Email:       Email:	Existing         Residential         Living Area         Garage/Storage         Deck         Porch         Carport         Remodel         Other:         Commercial/Industrial         Medical         Retail         Restaurant         Warehouse         Other:         Agricultural         Other:         Size of Structure:         Serial # of Bedrooms:         Serial #:_	Proposed  Sf	Grading       □ YES         Cut       (cy)       F         Area of disturbance	NO ill (cy) Slope (sf) ublic: (sf) perform any of the following? nce? way? upgrade an existing approach? roadside ditch? n County Right-of-Way? within County Right-of-Way? ny of the above actions. gs on the site? If so, please describe: 
Address:       0313 W SWRETWARK Dr., 142334, Arritona 01491         Agent Name:       Phone:       Email:         Address:       Phone:       Email:         Address:       Phone:       Email:         Address:       Phone:       Email:         Address:       Phone:       Email:	Applicant Information: Please check PROPERTY OWNER OWNER/BUILDER? *Proof of Property Owner Name: Marthn Re	the appropriate box AGENT Ownership will be Concerned Concerne	x for the primary contact required hone: $(\Gamma_{20})$ 330 - 233 $\Gamma$	Email: Martin Comartin reimann
Agent Name:     Phone:     Email:       Address:	Address: 0313 W SW LCTW	iller br, 1	acson, Arlitona	
Contractor Name:     Phone:     Email:       Address:     License # & Class:	Agent Name:	Pr	none:	_Email:
Address:	Contractor Name:	Pł	none:	Email:
	Address:			License # & Class:

3

Waste Management-Recycling Plan
 Yes -I understand that a Construction Waste Management Plan is required for all construction permits of 1,000 sf or more and all demolition permits. 50% diversion of your waste may be required.

<u>LICENSED CONTRACTOR DECLARATION</u>: I hereby affirm under penalty of perjury that I am licensed under the provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Date: \_\_\_\_\_ Contractor Signature:

**OWNER/BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code: Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).)

I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law.).

I, as owner of the property, or my employees with wages as their sole compensation, will do \_\_\_\_\_ail of OR (\_) portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the Owner-Builder will have the burden of proving that it was not built or improved for the purpose of sale.).

I am exempt from licensure under the Contractors' State License Law for the following reason:\_

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: http://www.leginfo.ca.gov/calaw.html.

Date: 7 / 10 / 2019 Owner Signature:

WORKER S' COMPENSATION DECLARATION: Please read carefully and check the applicable statement below:

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:

□ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are: Carrier\_\_\_\_\_Policy No\_\_\_\_\_Expiration Date\_\_\_\_\_

Name of Agent\_\_\_\_

Phone Number

□ I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

□ I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. Policy Number \_\_\_\_\_\_

#### CONSTRUCTION LENDING AGENCY:

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civil Code).

Lender's Name

Lender's Address

By my signature below, I certify to the following: I am (\_) a California licensed contractor or (\_) the property owner\* or (\_) authorized to act on the property owner's behalf\*\*. I have read this construction permit application and the information I have provided is correct. I agree to comply with all applicable city and county ordinances and state laws relating to building construction. I authorize representatives of this city or county to enter the above-identified property for inspection purposes.

<u>TIME LIMITATIONS OF APPLICATION</u>: An application for a permit for any proposed work shall be deemed to have been abandoned 1 year after the date of filing, unless a permit has been issued. The destruction of documents may occur 180 days after application expiration date.

2019 Date:

SIGNATURE OF A

SIGNATURE OF APPLICANT:

\* Requires Separate Owner Verification

\*\*Requires Separate Agent Authorization Form





## COUNTY OF MENDOCINO DEPARTMENT OF PLANNING AND BUILDING SERVICES

860 N BUSH STREET • UKIAH • CALIFORNIA • 95482 120 W FIR STREET • FORT BRAGG • CALIFORNIA • 95437 PHONE: 707-234-6650 FAX: 707-463-5709 FB PHONE: 707-964-5379 FB FAX: 707-961-2427 pbs@co.mendocino.ca.us www.co.mendocino.ca.us/planning

# Well Electrical Service Agreement

Property owners name: <u>Martin Reimann</u> Address: <u>2300 N Hwy J</u> Parcel number: <u>123-290-03</u>

Purpose and use of the well: To irvigate Management tree catting 19 jance lato. reter Main Sub DGC 2011

As owner, owner's contractor and/or agent of the land mentioned above, I understand that the authorization of this electrical service meter panel by the Mendocino County Building Official is only for the stated use above. I also understand that any connection to any other use requiring the connection electrical power from this service prior to obtaining permits and approvals from the Building Official is justification for the power source of this electric service panel to be disconnected from it's power source by order of the Building Official.

Signature: Dated: 19-0593 Permit # Witnessed By: Dated:





### North Coast Regional Water Quality Control Board

### **Inspection Memo**

- To: Gil Falcone, Senior Environmental Scientist, Southern Non-point Source and 401 Certification Unit
- **From**: Emma Tracy, Environmental Scientist, Southern Non-point Source and 401 Certification Unit
- **Date**: April 26, 2024
- Subject: March 27, 2024, inspection of unpermitted fill at 2300 N Hwy 1, Albion
- File:Martin Reimann, 2300 N Hwy 1, Albion, Mendocino County, CA 95410<br/>(APN 123-290-03); ECM PIN: CW-894571, WDID No. 1B24050WNME

### Background

On February 28, 2024, North Coast Regional Water Quality Control Board (Regional Water Board) staff Gil Falcone and Emma Tracy received a complaint investigation referral and notification from the County of Mendocino (County) for an unpermitted gravel driveway on the property at 2300 N Hwy 1, Albion (Property). The referral included descriptions of the existing unpermitted road constructed through previously mapped and delineated wetlands, a list of the property's permit history including County Building Permits, Coastal Development Permits, and a site plan dated June 6, 2023, for a proposed residence project. Within the referral, Liam Crowley of the County, states that "the current driveway configuration was not previously approved by the County". A call was scheduled for March 7, 2024, to discuss the site in further detail with the County and California Department of Fish and Wildlife (CDFW) staff. During this call, Liam shared additional site photographs and several maps and plans that the County has on file from previous County permits. Liam also noted that the existing unpermitted driveway had an underground electrical cable installed in May 2021, under an approved 2019 County Building Permit. Regional Water Board staff noted that we had not issued any permits for filling of wetlands on the Property.

The inspection property is located between Highway 1 and the Pacific Ocean about one mile north of the Navarro River and is located within the Mendocino Coast Hydrologic Unit 113.50. The property is owned by Martin Reimann.

HECTOR BEDOLLA, CHAIR | VALERIE QUINTO, EXECUTIVE OFFICER



Figure 1: Property Location map from a 2007 report on the Property from County files, north of the Navarro River and south of the town of Albion.

A site visit was scheduled for March 27, 2024, over email between staff from the County, CDFW, Regional Water Board, and the property owner's consultant. On March 13, 2024, Liam Crowley of the County received permission from the property owner for the multiple agencies in attendance to access the property. The focus of the inspection is the gravel driveway area, corresponding culverts within the driveway area, other areas where fill was placed within potential wetlands on the property, and any other wetlands or waters of the state on the property. The month of March, 2024, was slightly higher than a normal precipitation year, within 125-150% of normal according to the Quantitative Precipitation Estimates of NOAA's National Weather Service.

### Inspection

On March 27, 2024, Regional Water Board staff Gil Falcone and I arrived at the site at 10:30 am. Liam Crowley of the County, Jenn Garrison of CDFW, and Sarah Bradley who was the representative for the owner met us on the property driveway. The five of us began the inspection by walking from the beginning of the driveway adjacent to Highway 1 in the Southeast corner along the southern boundary, past a section where fig trees had been planted, and then north to meet the gravel driveway. In the southern section of the property, we observed a variety of wetland plants (see Photo 2 below), saturated soils, and surface water pooling in tire ruts and areas of lower topography.



Photo 1: Facing west, walking along the southern border of the property with the public trail located to the left of the trees. Surface water and wetland vegetation are seen in the center of the photo.



Photo 2: Facing west, as we continue to walk towards the gravel driveway. Wetland vegetation of rushes (*Juncus* sp.) are growing throughout the southern portion of the property.

The southern portion of the property that we began our inspection with was where documents from the County dated 1985 show a driveway originally planned to be constructed. It is likely that this area now contains wetlands, waters of the state, and would require appropriate permits from the Regional Water Board prior to any impact, including placement of fill or planting non-native vegetation.

We approached the gravel driveway on the western section of the property (see Photo 3) and Sarah Bradley, the property owner's representative, commented on the location of the septic system being west of the end of the gravel driveway. At this location, we expressed concern with a septic system potentially being placed without an appropriate buffer from the wetlands that could cause excess nutrients to infiltrate and impact the wetlands. After this site inspection, in a video call meeting with the property owner on April 10, 2024, we were informed that the septic system utilizes aerobic treatment and does not leach toward the wetlands.



Photo 3: Facing west, the end of the gravel driveway is visible.

North of the gravel driveway, within an area that has mowed vegetation and within the surrounding taller shrubs and grasses, we observed saturated soils, wetland vegetation species (see Photo 4), and pools of surface water. We also observed a picnic table and areas with wetland plants that had been recently and repeatedly mowed suppressing wetland plant growth. We walked east on the gravel driveway over a culvert measuring 20 feet long (Photo 5). The culvert appeared undersized. Properly sized and installed culverts are at reduced risk of plugging and potential crossing failure, and fine sediment discharge. As plans for this culvert were not reviewed by Regional Water Board staff, it is unknown what flow the structure currently has capacity for. Upstream of the culvert we observed altered site hydrology due to the installation of the gravel driveway. The edges of the driveway have begun to erode due to water being concentrated to a narrower channel, as opposed to spreading and sinking into a vegetated area as pre-gravel driveway would have allowed. Incision of the edge of the gravel driveway is seen in Photo 6 below.



Photo 4: Facing east, wetland vegetation (*Juncus* sp.) is seen growing through an area that has been mowed. The gravel driveway is seen in the background.



Photo 5: Outlet of the culvert under the gravel driveway.



Photo 6: Facing east. Surface water is traveling on the edge of the gravel driveway and incising the vegetation and soil of the adjacent land.

As we approached the eastern part of the driveway, where our inspection began, we crossed a second culvert. This second culvert measured 20-feet long with a 1.5-foot diameter, made of corrugated high density Polyethylene (HDPE) material, had a rocked inlet, and was perpendicular to the water flowing alongside the gravel driveway. It could not be determined if this culvert was properly sized or installed as it was not permitted by the Regional Water Board.



Photo 7: Facing west, corrugated HDPE culvert underneath gravel driveway.



Photo 8: West of the corrugated HDPE culvert.

Next to the gravel driveway, on the eastern side of the property, water flows through the culvert and rocked outlet to a vegetated area. Rushes, shrubs, and trees are growing in this section of the property. From the observed vegetation and hydrology indicators, this area likely contains wetlands, however, a wetland delineation would need to be conducted in order to determine the location and extent of wetlands on the property. Water that is flowing through the culvert has begun to incise and create a channel for surface water flow at a lower elevation than the rest of the vegetated ground. This altered hydrology is a result of the unpermitted driveway and culvert installation.

As we walk further east of the gravel driveway, we observe a water pump, trenching and water tank placed in an area with saturated soils and ponding of surface water, potentially a wetland. Placement of infrastructure within wetlands requires a permit from the Regional Water Board.



Photo 9: On the east side of the driveway facing west. Saturated soils and wetland vegetation are seen in the foreground east of the driveway where the truck is seen parked in the background.



Photo 10: Water tank on the eastern side of the property.



Photo 11: Water pump with saturated soils and some ponding on the right hand side.

### Historical Site Analysis

After the site visit, a historical analysis of the site using aerial Google Earth imagery was conducted. Four aerial images are shown below that document various stages of development on the property. In the 2021 photo, tire tracks of exposed dirt are visible in a similar place to the installed gravel road, within wetland areas. In the 2018 photo below, no dirt roads or tire ruts are visible. In the 2009 photo below, no roads pass through the northern section of the property, however, a dirt road is visible on the property's southern edge in a similar location to the original placement proposed in 1985. By 2018, vegetation had grown over this path. In all the photos below a channel on the northernmost side of the property is visible and has remained undisturbed.

Water within the watershed that may have flowed in a dispersed manner through the property soils and vegetation has been intercepted in several places with the unpermitted gravel driveway. The incision adjacent to the driveway and as a result of the two installed culverts directing flow can be seen in the most recent aerial image, but not in images prior to the driveway installation. If continued, the altered hydrology from installing the driveway and culverts resulting in more channeled surface water flow

increases the risk of dewatering wetland areas that existed under the previous hydrologic regime.





Image 12-15: Aerial images of the site in order from top to bottom: 2023, 2021, 2018, 2009.

### **Conclusions and Recommendations**

During the inspection, Regional Water Board staff observed unpermitted fill of gravel, underground electrical utilities, and culverts within wetlands, waters of the state. Work within creeks, riparian areas, and wetlands, such as placing fill or installing infrastructure of pumps (trenching), water tanks, or culverts need the appropriate permits from the Regional Water Board. The landowner did not go through the appropriate permitting pathways for work within Waters of the State and or Waters of the U.S.

The Regional Water Board staff informed the attendees that violations of the California Water Code had been observed and recommended that the owner halt additional impacts to wetlands as well as stop mowing the areas that had vegetation mowed so that an aquatic resource delineation could be performed in the near future. The Regional Water Board staff recommends a Notice of Violation to be issued to the property owner that contains further assessment of these violations and recommendations to get the site back into compliance.





North Coast Regional Water Quality Control Board

### Notice of Violation

April 26, 2024

Certified Mail No. 7018-1130-0000-5963-8143

Martin Reimann 6353 W Sweetwater Dr Tucson, Arizona 85745 martinreimann@icloud.com

Dear Martin Reimann,

- Subject: Notice of Violation and Transmittal of Site Inspection Memo, 2300 N Highway 1, Albion; APN 123-290-03
- File: Martin Reimann, 2300 N Highway 1, Albion, Mendocino County, CA 9 5410 (APN 123-290-03); ECM PIN: CW-894571, WDID No. 1B24050WNME

This letter is to notify you (the Discharger) of observed and documented violations of the requirements listed below for unauthorized discharges to waters of the state from Sonoma County Assessor's Parcel Number 123-290-03 (Property):

- 1. California Water Code (Water Code) sections 13260, 13261(a), 13264(a), 13265(a), and 13377.
- Possible Clean Water Act section 301 (a) (33 U.S.C. 1311), section 401 (33 U.S.C. 1341), and section 404 (b)(1) (33 U.S.C. 1344), pending federal jurisdictional determination

The North Coast Regional Water Quality Control Board (Regional Water Board) is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within the north coast portion of the State of California. The Regional Water Board issues permits for discharges or threatened discharges of waste to waters of the state and Water Quality Certifications for dredge or fill activities within Waters of the United States, including wetlands.

HECTOR BEDOLLA, CHAIR | VALERIE QUINTO, EXECUTIVE OFFICER

On March 27, 2024, Regional Water Board staff participated in a site inspection of the Property (see Attachment 1, Site Inspection Memo, inspection of 2300 N Highway 1, Albion, APN 123-290-03). The inspection report documents and provides evidence of unpermitted activities that impact waters of the state and possibly waters of the United States at the site.

By this letter, we are providing you notice that such activities violate provisions of the Water Code due to the unpermitted discharges and/or threatened discharges of material or fill into wetlands, waters of the state and possibly waters of the United States (see Exhibit A, Regulatory Citations).

### **Property Background**

Regional Water Board staff (Gil Falcone and Emma Tracy) received a complaint investigation referral from the County of Mendocino (County) regarding unpermitted fill that had been placed within wetlands on the property at 2300 N Highway 1, Albion, 95410 (Site).

On March 27, 2024, Regional Water Board staff inspected the Site with Jennifer Garrison Sr. Environmental Scientist Specialist of CDFW, Liam Crowley Planner from the County, and Sarah Bradley the owner's representative. The purpose of the inspection was to determine if wetlands were present and if fill had been placed without a permit. The property is located within the Mendocino Coast Hydrologic Unit 113.50. The property is owned by Martin Reimann (landowner).

### **Relevant Requirements**

During the inspection, Regional Water Board staff observed features and conditions on the Property that represent violations of water quality requirements and regulations. Exhibit A – Regulatory Citations, provides references to these requirements and regulations.

### **Observed Violations**

Regional Water Board staff inspected the Site (latitude 39.20798 ° N, longitude 123.76856 ° W) and confirmed the unpermitted fill and excavation of gravel road material, culverts and electrical utilities within areas exhibiting jurisdictional wetland characteristics. A recent wetland delineation of the site was not completed prior to placement of the fill, however two of the three necessary wetland parameters (dominance of hydrophytic plants and hydrology) were observed on the site during the inspection. A historical analysis of aerial images indicates the unpermitted gravel driveway was constructed at a point in time after June 2021 and before October 2023, which aligns with the information provided by the County as the Building Permit for trenching to bury underground electrical cable for two wells under the driveway was finalized May 11, 2021. A wetland delineation conducted in 2007 indicates wetlands present on the site and documents listed Obligate (OBL), Facultative Wetland (FACW),

and Facultative (FAC) plants within the U.S. Army Corps of Engineers 2020 National Wetland Plant List. Although this delineation is outdated, evidence of previously existing wetland hydrology, soils, and vegetation, in addition to observed wetland hydrology and vegetation from the site visit, indicates that there is a high likelihood that wetlands were present at that time. Previously delineated wetland areas are now filled at the site impacting their beneficial uses.

Dredge and fill activities or discharge of a waste in the wetland area were not authorized by the Regional Water Board. These activities might also have required permits from U.S. Army Corps of Engineers or the California Department of Fish and Wildlife. Any jurisdictional determination and permitting requirements for fill within waters of the United States would be made by the US Army Corps of Engineers. These unauthorized impacts have caused ecological degradation and loss of functions within the wetland area.

Placement of fill material within a water of the state including wetlands requires authorization from the Regional Water Board under section 13260 of the Water Code (see Exhibit A). You did not obtain authorization prior to this discharge and are currently in violation of these regulations. Attachment 1 clearly documents your activities have discharged prohibited materials into areas that are likely waters of the state (wetlands) and are in violation of these prohibitions.

### Navarro River Hydrologic Area 113.50

The wetland is located within the Mendocino Coast Hydrologic Unit, Navarro River Hydrologic Area 113.50. The existing Beneficial Uses freshwater wetlands include:

- Flood Peak Attenuation/ Flood Water Storage
- Wetland Habitat
- Water Quality Enhancement

Activities that may directly or indirectly impact beneficial uses of waters of the state require you to apply for a Clean Water Act section 401 Water Quality Certification and/or Waste Discharge Requirements (WDRs). These activities might also require input, consultation, and permits from other federal, state, and local agencies.

For information on permits for fill and excavation within waters of the state and/or United States, please consult <u>our website here</u>:

(https://www.waterboards.ca.gov/northcoast/water\_issues/programs/water\_quality\_certification/).

### **Non-compliance and Enforcement**

Please note that correcting the conditions of non-compliance at the site does not preclude enforcement for the violations alleged in this notice. The following sections of the Water Code may apply to the activities: 13260, 13261(a), 13264 (a), 13265(a),

13377 (See Exhibit A). The Regional Water Board reserves its right to fully enforce the law against any violation by taking enforcement actions. Discharges or threatened discharges of waste, including fill of wetlands, waters of the state and/or United States that create a condition of nuisance or pollution may subject a person to a Cleanup and Abatement Order pursuant to Water Code section 13304. An actual discharge to waters of the state, including allowing fill to remain within a water of the United States, may subject a person to an administrative liability up to \$5,000 per day of violation for each violation, or \$10 for each gallon of waste discharged pursuant to Water Code section 13350. Unlawful discharges to waters of the United States and/or violations of the Clean Water Act may subject a person to up to \$10,000 per day of violation for each violation, and up to \$10 per gallon of waste discharged over 1,000 gallons not cleaned up pursuant to Water Code section 13385. The Regional Water Board retains its discretion to refer this matter to the Attorney General for enforcement. We will contact you upon further assessment of these violations to discuss any potential associated civil liability or other enforcement actions.

### Recommendations

The March 27, 2024, Site Inspection Memo documents and provides evidence of unpermitted impacts to waters of the state and/or United States at the site. To address conditions that impact water quality described in the inspection report, get the site back into compliance, and avoid enforcement actions we recommend that the landowner propose to take action to restore and/or mitigate the wetlands by submitting a permit application to conduct the restoration and mitigation, including monitoring to show success criteria are met.

- 1. Contact the Regional Water Board within 30 days of receipt of this Notice of Violation to discuss actions you will take to get the site back into compliance.
- 2. Conduct a forensic wetland and waters delineation within 90 days of receipt of this Notice of Violation to determine location of all aquatic resources (waters of the state) including wetlands and quantify the impacts to resources on the property including those that may have been filled without a permit. Submit this for review by the Regional Water Board upon completion.
- 3. Using results from the forensic wetland and waters delineation and the U.S. Army Corp of Engineers Mitigation Calculator (12501-SPD.06), develop a restoration mitigation & monitoring plan (RMMP) that includes at a minimum: identified and mapped wetland areas to be created or restored, meets or surpasses the quantity of creation and/or restoration required to account for temporal and functional losses from all unpermitted impacts, develop a planting palate with dominant wetland plants appropriate to the site, propose implementation methods to relocate infrastructure if necessary and grade and plant wetland creation and/or restoration areas, invasive species controls, propose annual performance criteria and 5-year success criteria (wetland species diversity enhancement, invasive reduction, delineation after completion of monitoring), any adaptive management anticipated and long-term wetland protection measures. This plan should meet the requirements of all agencies involved. If you do not propose sufficient mitigation for the unpermitted impacts to remain, the fill

material will need to be removed and resources restored in addition to mitigation for temporal losses.

- 4. Submit an application for the appropriate permit from the Regional Water Board and all other applicable agencies to conduct these restoration and mitigation activities.
- 5. Implement the restoration, mitigation, and 5-year monitoring plan and demonstrate success criteria is being met to get the impacted site back into compliance.

The Regional Water Board reserves its right to fully enforce the law against any violation and threatened violation by taking enforcement actions. Discharges or threatened discharges of waste, including gravel, earthen material, utilities and other infrastructure into waters of the state and possibly waters of the United States that create a condition of nuisance or pollution may subject a person to a Cleanup and Abatement Order.

If you have any questions regarding this matter, please contact Gil Falcone at <u>Gil.Falcone@waterboards.ca.gov</u> or (707) 576-2830 or Emma Tracy at <u>Emma.Tracy@waterboards.ca.gov</u> or (707) 576-2834.

Sincerely,

Gil Falcone

Senior Environmental Scientist, Supervisor Southern 401 Certification Unit

- **Exhibit A**: Regulatory Citations
- Attachment 1: Site Inspection Memo, March 27, 2024, inspection of unpermitted fill at 2300 N Hwy 1, Albion
- cc: Jenn Garrison, California Department of Fish and Wildlife, jennifer.Garrison@wildlife.ca.gov Liam Crowley, County of Mendocino, crowleyl@mendocinocounty.gov Tatiana Garcia, CA Coastal Commission, tatiana.garcia@coastal.ca.gov U.S. Environmental Protection Agency, R9cwa401@epa.gov Nathan Jacobsen, State Water Resources Control Board, Office of Chief Counsel, Nathan.Jacobsen@waterboards.ca.gov Jeremiah Puget, North Coast Regional Water Board, Jeremiah.Puget@waterboards.ca.gov USACE, CESPN-Regulatory-Info@usace.army.mil

Exhibit A: Regulatory Citations:

Regulatory Section	Citation
California Water	"(a) Each of the following persons shall file with the appropriate regional board
Code Section 13260	a report of the discharge, containing the information that may be required by the
	regional board:
	(1) A person discharging waste, or proposing to discharge waste, within any
	region that could affect the quality of the waters of the state, other than into a
	community sewer system.
	(2) A person who is a citizen, domiciliary, or political agency or entity of this
	state discharging waste, or proposing to discharge waste, outside the
	boundaries of the state in a manner that could affect the quality of the waters of
	the state within any region."
California Water	"A person who fails to furnish a report or pay a fee under Section 13260 when
Code Section	so requested by a regional board is guilty of a misdemeanor and may be liable
13261(a)	civilly in accordance with subdivision (b)."
California Water	"No person shall initiate any new discharge of waste or make any material
Code Section	changes in any discharge, or initiate a discharge to, make any material changes
13264(a)	in a discharge to, or construct, an injection well, prior to the filing of the report
	required by Section 13260 and no person shall take any of these actions after
	filing the report but before whichever of the following occurs first:"
California Water	"Any person discharging waste in violation of Section 13264, after such
Code Section	violation has been called to his attention in writing by the regional board, is
13265(a)	guilty of a misdemeanor and may be liable civilly in accordance with subdivision
	(b). Each day of such discharge shall constitute a separate offense."
California Water	"Notwithstanding any other provision of this division, the state board or the
Code section 13377	regional boards shall, as required or authorized by the Federal Water Pollution
	Control Act, as amended, issue waste discharge requirements and dredged or
	fill material permits which apply and ensure compliance with all applicable
	provisions of the act and acts amendatory thereof or supplementary, thereto,
	together with any more stringent effluent standards or limitations necessary to
	implement water quality control plans, or for the protection of beneficial uses, or
	to prevent nuisance."
Clean Water Act	Section 301 (a) (33 U.S.C. 1311), section 401 (33 U.S.C. 1341), and section
	404 (b)(1) (33 U.S.C. 1344) of the Clean Water Act

# REVISED RESTORATION AND MITIGATION MONITORING PLAN (RMMP)

for

2300 N Hwy 1 Albion, California 95410

APN: 123-290-03 Mendocino County

Property Owners: Martin Christian Reimann and Oliver Siegfried Schilke PO Box 331 Albion, California 95410-0331

This Revised Restoration Mitigation and Monitoring Plan (RMMP) represents an update to the RMMP reported in the BIOLOGICAL SCOPING SURVEY, WETLAND DELINEATIONS, & BOTANICAL SURVEYS, dated August 11, 2024. This project intends to meet the definitions of an "Ecological Restoration and Enhancement Project" set forth in the State Wetland Definition and Procedures for Discharge of Dredged or Fill Materials to Waters of the State, adopted by the State Water Board on April 2, 2019.

The property owners, Martin Christian Reimann and Oliver Siegfried Schilke, have adopted the outlined mitigation measures and are fully committed to carrying out the creation of the new wetland and the subsequent 5-year monitoring.

All feasible mitigation measures capable of reducing or eliminating project related impacts have been adopted by the property owners.

m Shr

11/12/2024

Martin Reimann

Oliver Schilke

### 7.4.

This restoration mitigation and monitoring plan (RMMP) is designed to comprehensively address how this Ecological Restoration and Enhancement Project will be carried out and how the recommended restoration mitigation measures (see 7.3.1. the BIOLOGICAL SCOPING SURVEY, WETLAND DELINEATIONS, & BOTANICAL SURVEYS dated August 11, 2024) will be monitored, ensuring ecological functionality and compliance with regulatory standards. The plan's flexibility allows for adaptive management strategies to effectively respond to monitoring outcomes and evolving site conditions. This RMPP is based on the regulations set in Mendocino County Code Sec. 20.532.065 – Wetland Restoration Plan Procedures. This RMPP also addresses point 3 of the Recommendations made by the North Coast Regional Water Quality Control Board in its letter from April 26, 2024 and is intended to ensure compliance with the California Water Code and the Clean Water Act, as referenced in the letter. In addition, it addresses the CEQA Guidelines Section 15126.4(a)(1)(B), as referenced by the Mendocino Planning and Building Services Department.

Where will the wetlands be created? As shown in Figure RMMP-1, the newly created wetland will be adjacent to a naturally occurring wetland to establish ecological continuity between existing and new wetlands. As per instructions from the Regional Water Control Board, this new wetland will be an extension of the existing wetlands, and will be outside of the buffer from the proposed development area. The new wetland sits at the same elevation as the adjacent wetland for water to ooze from the existing to the new wetland. It sits lower than an adjacent grass field and, therefore, is ideal for allowing additional water to ooze to the naturally occurring depression in the land to create hydric soils during seasonal rainfall. The size of the wetland will be 0.122 acres as per instructions from the Regional Water Control Board from October 29, 2024.
Figure RMMP-1: Bright Green Circle Represents the Approximate Location of the Newly Created Wetland in Relationship to the Presumed Seasonal Wetland ESHA & Existing and Proposed Development



What actions will be taken to grade the land and allow water to inundate to create hydric soils? The existing contour of the land will be carefully and minimally graded by using a small excavator/tractor to scrape the topsoil and thus achieve the same elevation of the adjacent existing wetland for water to ooze over to the new wetland. The scraped topsoil be evenly spread at a higher-level on the property location, outside the ESHA buffer. Grading will be conducted on no more than 0.122 acres to facilitate the naturally appearing depression in the land that collects rainwater and promotes the natural growth of native wetland vegetation. Grading will not result in standing water or a pond. The area will be accessed from the site of the proposed development (i.e., from the south; see Figure RMMP-1), and will thus have no impact on any of the existing wetlands. The work will be conducted by a professional contractor, highly knowledgeable in grading.

 Identify where the water is coming from. The primary sources of water for the new wetland will be seasonal rainwater, including from the existing adjacent wetland and a higher-elevation grass field. This water will help maintain the minimum 14 consecutive days of saturation required to support hydric soils and wetland vegetation and ensure that the wetland receives adequate water year-round. Time table of when the creation is desired to occur, construction methods, timing, and sequence: The creation of the new wetland will occur toward the end of the 2025 dry season in October of 2025. The total duration of grading and planting will be approximately 1 week. The area will be staked to measure 0.122 acres, then graded with a small excavator/tractor to the same elevation as the existing adjacent wetland. Planting of native species will take place immediately thereafter to prevent the growth of invasive species and for plants to receive adequate water supply from rain storms during the following wet season.

7.4.1. **Regular Monitoring**: A regular monitoring schedule (see report template attached) has been set up, biannually, to observe and record the conditions of the wetland and surrounding areas. The property owner will utilize a combination of visual inspections, photographic records, and biological surveys to detect any invasive species or ecological changes and record the outlined metrics (see report template attached). Based on this monitoring schedule, the property owner and/or a consulting biologist will prepare an annual report each year to summarize these metrics and will make necessary adjustments to planting strategies and/or management practices based on annual performance to ensure ongoing success. A response plan to manage invasive species will be implemented promptly as they are detected, including physical removal. The sizing of the existing culverts is checked annually to omit any risk of plugging and potential crossing failure, and fine sediment discharge. No chemical treatment will be performed. Invasive species will be manually removed.

7.4.2. **Performance and Success Criteria**: After 2 years of monitoring, cover of wetland species should be >60% and increase by 2-5% yearly until the goal of 80% within the restoration area is reached by the end of the monitoring period (i.e., 5 years). In addition, the area covered by other non-invasive species will be reduced to <10%. These specific values meet the CEQA Guidelines Section 15126.4(a)(1)(B), which recommends to adopt specific performance standards the mitigation will achieve.

The following list of wetland species will be established, based on actual plant observations in the BIOLOGICAL SCOPING SURVEY, WETLAND DELINEATIONS, & BOTANICAL SURVEYS dated August 11, 2024:

- Horsetail (*Equisetum telemateia and Equisetum arvense,* which was observed at Sampling Point SP05 close in proximity to the new wetland)
- Yarrow (Achillea millefolium, which was observed at SP05)
- Toad rush (Juncus bufonius, which was observed at SP05)
- Rushes (Juncus spp, which was observed by the Regional Water Control Board near SP02)
- Slough sedge (Carex obnupta)

The planting will be a mix of seeds of the aforementioned native plants.

7.4.3. **5-Year Success Criteria**: After 5 years of monitoring, cover of wetland species should be >80% and cover of non-invasive species should be reduced to <10%. These specific values meet the CEQA Guidelines Section 15126.4(a)(1)(B), which recommends to adopt specific performance standards the mitigation will achieve. A wetland delineation will be conducted at the end of the 5 years to determine that 0.122 acres of wetlands have been created. A qualified restoration ecologist will assist the wetland construction and monitoring efforts through plant identification, their wetland mitigation expertise, and assessing the resulting new wetland delineation after 5 years.

7.4.4. Adaptive Management and Long-Term Protection: Data will be collected from regular monitoring to identify trends or issues that may require intervention. The property owner is prepared to adjust restoration techniques, plant species selection, or management practices based on observed data and external factors like climatic changes. The property owner has also started to implement physical barriers (hedge) to protect sensitive areas from human disturbances.

7.4.5. **Agency Coordination**: The North Coast Regional Water Quality Control Board and the County of Mendocino Department of Planning and Building Services will be kept informed of project progress through updates and consultation meetings. The property owner ensures all construction and restoration activities comply with relevant permits and regulations. Monitoring reports will be sent in annually to <u>NorthCoast@waterboards.ca.gov.</u> At the end of five years, a comprehensive review of the project's success against these criteria will be conducted and reported to the project stakeholders (i.e., Regional Water Control Board).

7.4.6. **Documentation and Reporting**: The property owner maintains detailed records of all restoration mitigation, planting, monitoring, and management activities, and is prepared to submit regular reports to the appropriate agencies, detailing progress, compliance with permits, and any challenges faced.

# Additional response to checklist on page 14-15 of the 401 Application:

- **Responsible Parties:** Martin Reimann and Oliver Schilke (Phone: 520-330-2335) will oversee implementation, starting May 16, 2025, managing all activities at Albion.
- Metrics: See attached report which will be filled out each year.
- Rationale for Success: The rationale for success of this Revised Restoration Mitigation and Monitoring Plan (RMMP) at 2300 N Hwy 1, Albion, California, is based on a robust design that integrates ecological continuity, targeted hydrology, adaptive management, and rigorous monitoring. By situating the new wetland adjacent to an existing natural wetland, the project leverages the ecological stability and biodiversity of nearby habitats, creating an interconnected environment that supports a range of wetland functions, from hydric soil development to species habitat. The site's natural topography, with its lower elevation near a grass field, ensures consistent seasonal inundation from groundwater and rainwater, which in turn supports necessary soil

saturation and vegetation growth. Furthermore, environmentally sensitive grading techniques are employed to form a natural depression and thus foster hydric conditions that encourage the establishment of native wetland species. Regular biannual monitoring and adaptive management practices, including invasive species control and performance adjustments, will allow for proactive response to any environmental changes or challenges over the 5-year monitoring period. These strategies, combined with rigorous adherence to the performance criteria of 80% native wetland cover by year five, build a strong case for the long-term success and ecological viability of the wetland, meeting both regulatory and environmental goals.

- Completion of Ecological Restoration and Enhancement Project: October/November 2025
- Completion of Monitoring Period: Martin will notify send a final report to <u>NorthCoast@waterboards.ca.gov</u> upon project completion, ensuring that the Regional Board confirms and documents the success.

# **ANNUAL MONITORING REPORT**

Email to: NorthCoast@waterboards.ca.gov

Date to be submitted by November 30 of each year (2025-2030)

Responsible party:	Martin Reimann
	Phone: (520-330-2335)
Date recorded (between February-May and	
between August-November):	
Metrics:	
% native plant cover (Measurement of the	February-May:
percentage of area covered by native wetland	
plant species through visual surveys or photo	August-November:
documentation)	
Invasive species presence (Recording of the	February-May:
presence and percentage cover of invasive	
plant species within the wetland area to	August-November:
monitor for unwanted growth)	
Water depth and duration (Measurement of	February-May:
water depth in specific locations over time to	
track inundation duration and seasonal	August-November:
changes)	
Wildlife presence (Recording of sightings of	February-May:
target wildlife species such as bird nesting,	
amphibian presence as indicators of a	August-November:
healthy habitat)	
Notes:	

Attached photos:

# WATER QUALITY CERTIFICATION AND/OR WASTE DISCHARGE REQUIREMENTS (Dredge/Fill Projects)

What is it? A Clean Water Act Section 401 Water Quality Certification (401 Certification) is an order (findings with a conditional permit) issued by the State Water Resources Control Board and Regional Water Quality Control Boards. Applicants for federal permits that involve dredge, fill or excavation activities within waters of the United States (including wetlands) are required to obtain certification from the state. The most common of these federal permits are referred to as federal Clean Water Act Section 404 permits issued by the Army Corps of Engineers (Army Corps) and Rivers and Harbors Act Section 9 and 10 permits. A 401 Certification is an order certifying that the proposed project will comply with CWA Sections 301 (Effluent Limitation), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance) and 307 (Toxic Pretreatment Effluent Standards), applicable state laws, and will be protective of beneficial uses identified within the region's basin plan. In accordance with section 404(b)(1) of the Clean Water Act (33 U.S.C. 1344) and the California Environmental Quality Act (CEQA), the discharge of dredge or fill materials, and the design and implementation of any project that requires a 401 Certification, shall avoid, minimize, and mitigate impacts to aquatic resources and the environment. Where impacts are determined to be unavoidable, mitigation projects are required to compensate for the loss of aquatic resources. Individual 401 certification applications need to comply with The State Wetland Definition and Procedures for the Regulation of Discharges of Dredged or Fill Material to Waters of the State (Procedures), that can be found here:

<u>https://www.waterboards.ca.gov/water\_issues/programs/cwa401/docs/procedures\_conformed.pdf</u> Under the California Water Code Section 13260, Waste Discharge Requirements (WDRs) are necessary for any persons discharging or proposing to discharge waste, including Dredge and/or Fill materials, that could affect the quality of the waters of the State. Projects that receive a 401 Certification are also granted general WDRs.

**Who Needs It?** Anyone proposing to conduct a project that requires a federal permit or that may result in a discharge to waters of the United States and/or waters of the state, including wetlands (all types), rivers, streams (including perennial, intermittent, and ephemeral streams) lakes, estuaries, harbors, bays, and the Pacific Ocean.



**How do you get it?** Electronically submit (preferred) a completed 401Water Quality Certification /Waste Discharge Requirements application to: *Northcoast@waterboards.ca.gov* 

Or mail to: *North Coast Regional Water Quality Control Board 5550 Skylane Blvd., Suite A Santa Rosa, CA 95403* 

# What happens after application

**submittal?** Staff review your application. You will be contacted within 30 days of submittal informing you if the application is complete or incomplete. A site inspection may be scheduled. Staff are available for assistance throughout the application process.

NCRWQCB Revised December 10, 2020. Questions, contact the 401 Certification Unit Supervisor at (707) 576-2220. To download this form in MS Word visit <u>https://www.waterboards.ca.gov/northcoast/water\_issues/programs/water\_quality\_certification/</u>

# Application for 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill)

The following application must be submitted to the Regional Water Qualitrequire Water Quality Certification and/or Waste Discharge Requirement documentation* electronically to: <u>NorthCoast@waterboards.ca.gov</u> or set Application Fee as required according to the CCR 23 Section 2200	ty Control Board for dre ts. Submit this applicatio end to address below. S	dge/fill projects t in and the appro ubmit current	hat priate
(a)(2) Fee Schedule** to:	For Internal Office Use On	ly	
North Coast Regional Water Quality Control Board 5550 Skylane Blvd., Suite A Santa Rosa, CA 95403 (Make checks payable to: State Water Resources Control Board)			
Information about paying fees online can be found at <a href="https://www.waterboards.ca.gov/resources/fees/index.html#wdr">https://www.waterboards.ca.gov/resources/fees/index.html#wdr</a>			
*Clarification of information may be requested by Regional Water Quality staff during application review. **Application Fee calculator available at	WDID#	Check #	\$

https://www.waterboards.ca.gov/northcoast/water issues/programs/water quality certification/ Fees are subject to change, use current fee schedule when application is submitted.

# **SECTION ONE – Applicant Information & Agent Authorization**

**Important Note**! The applicant listed shall be the party responsible for compliance with the Clean Water Act, California Water Code, Basin Plan, and 401 Certification Conditions and is typically the property/facility owner. The authorized agent is the individual or team that is authorized to provide information to the Regional Water Board on behalf of the applicant (responsible party).

APPLICANT/PROPERTY OWNER(S) NAME Martin Christian Reimann and Oliver Siegfried Schilke	AUTHORIZED AGENT NAME AND TITLE (an agent is not required)
APPLICANT/PROPERTY OWNER(S) MAILING ADDRESS 6353 W Sweetwater Dr, Tucson, Arizona 85745	AUTHORIZED AGENT MAILING ADDRESS
APPLICANT/PROPERTY OWNER(S) PHONE NUMBER (520) 330-2335	AUTHORIZED AGENT PHONE NUMBER
APPLICANT/PROPERTY OWNER(S) EMAIL martinreimann@icloud.com	AUTHORIZED AGENT EMAIL
STATEMENT OF AUTHORIZATION (Required when Applicant is designed when Applicant is designed by the statement of the statement	nating an authorized Agent)
I hereby authorize application and to furnish, upon request, supplemental information in supp <u>Signature of Applicant or agent is also required on final page of appl</u>	to act on my behalf as my Agent in the processing of this ort of this permit application. <b>ication.</b>
Martin Christian Reimann and Oliver Siegfried Schil	ke
PRINT NAME OF APPLICANT (NOT THE AUTHORIZE	D AGENT)
Min how Sha	11/2/2024
SIGNATURE OF APPLICANT (NOT THE AUTHORIZE	D AGENT) DATE

NCRWQCB Revised December 10, 2020. Questions, contact the 401 Certification Unit Supervisor at (707) 576-2220. To download this form in MS Word visit <u>https://www.waterboards.ca.gov/northcoast/water\_issues/programs/water\_quality\_certification/</u>

# **SECTION TWO – Project Information**

Please refer to the attached Project Plan Checklist (Attachment A) for guidance and attach additional supporting documentation as necessary. When attaching supporting documentation the pertinent information shall be clearly identified by corresponding tabs, page numbers, etc., such that pertinent information is easily located. Please do not indicate "see attached" without identifying the attached document and the specific location within the document. Supplying detailed information will aid the review process; however, a complete application for water quality certification need not contain unnecessarily duplicative information. Applications containing multiple descriptions with conflicting data or other conflicting information will delay processing and may result in denial without prejudice. Electronic submittals preferred, send to: <u>Northcoast@waterboards.ca.gov</u> Required contents of a complete application can found in the Procedures and the California Code of Regulations (CCR) Title 23, Section 3855 CCR Link - http://www.calregs.com/

#### PROJECT NAME OR TITLE

Wetland creation to mitigate impact on an existing driveway on a residential property.							
<b>PROJECT STREET ADDRESS</b> (if applicable) 2300 N Hwy 1	PROJECT LOCATION (Attach a site location map)         COUNTY       CITY/TOWN (nearest)         Mendocino County       Albion, CA						
CITY/STATE/ZIP (or nearest city/town) Albion, CA 954010	LATITUDE (Decimal Degrees) 39.2078279	LONGITUDE (Decimal Degrees) -123.7709439					
ASSESSORS PARCEL NUMBER(S) 230-190-0300	SECTION, TOWNSHIP, RANGE, USGS QUADRANGLE MAP (Optional Information)						
DIRECTIONS TO THE SITE							
From the center of Albion, CA, drive	e south on Hwy 1, then turn r	ight onto property (see fire department sign)					
PROJECT PURPOSE AND FINAL GOAL OF EN information as necessary.	ITIRE ACTIVITY (See Project Planning	Checklist -Attachment A for guidance. Attach additional					
To create a small circular wetland ac	ljacent to a riparian area and t	to plant and over time establish native					
wetland vegetation.							
<b>PROJECT DESCRIPTION</b> See Project Plan Checklist - Attachment A for guidance. Provide a full, technically accurate description of the entire activity and associated environmental impacts. Please do not indicate "see attached" without identifying the attached document and the specific location within the document. Attach additional pages as necessary.							
See attached RMMP for a detailed p	roject description.						

PROPOSED START AND END DATES	ESTIMATED DURATION	Will ground disturbance take place during the wet season
May 16, 2025-October 14, 2025	1 week grading and planting within the time span, then 5- year monitoring.	months of October 15 through May 15?

# SECTION THREE – Additional Documentation Required (CCR Title 23, Section 3855)

Provide copies of any final and signed federal, state, and local licenses, permits, and agreements (or copies of the draft documents, if not finalized) that will be required for any construction, operation, maintenance, or other actions associated with the activity. If no final or draft document is available, a list of all remaining agency regulatory approvals being sought shall be included.

FEDERAL PERMIT(S) OR COMPLETED FE	DERAL APPLICATION	S		
		-		
U.S. Army Corps of Engineers - Staff Contact	Name	Ph. #	E-mail	
□ Individual Permit				
Nationwide Permit Number Li Non-H	Reporting or LI Reporting	ng		
Li Regional General Permit / Number				
U.S. Fish and Wildlife Service - Staff Contact:	Name	Ph.#	E-mail	
Biological Assessment				
Biological Opinion				
LLO, National Marine, Fishering, Ormitae, Otaff	O sector of Niesson	DI: //		E se sil
U.S. National Marine Fisheries Service - Stati	Contact: Name	Pn. #		E-mail
Biological Opinion				
STATE PERMIT(S) OR COMPLETED STAT	E APPLICATION (A CO	OPY OF EITHER OF	THESE MUS	ST BE SUBMITTED WITH THIS
APPLICATION (applied for or approved, i.e. L	ake or Streambed Alter	ration Agreement (16	00-1608) or	Coastal Development Permit)
STATE PERMIT TITLE	FILE DAT	E	ŀ	-ILE NUMBER
Coastal Development Permit: 2/17/1988: Vest	20240004. ed CDP 1-81-85			
STATE PERMIT TITLE	FILE DAT	E		FILE NUMBER
LOCAL PERMIT(S) (applied for or approved,	i.e. grading permit, buil	ding permit)		
PERMIT TITLE	FILE DAT	E		FILE NUMBER
Grading permit for utilities, irrigation, driveway	r; 8/19/2019; BF 2019-0	593.		
CALIFORNIA ENVIRONMENTAL QUALITY	ACT COMPLIANCE (T	he project must comp	ply with Calif	ornia Environmental Quality Act (CEQA)
before a Water Quality Certification Order ma	y be issued unless an e	exemption pursuant to	o CEQA is ap	pplicable. Although final CEQA
CEOA documentation prior to issuing a Water	Ouality Certification	di Waler Doard Shairi der In accordance w	vith the Perm	with a completed, approved, and/or certified bit Streamlining Act Section 65952 Final
action must be taken on a 401 Certification pr	oiect within (1) 180 day	s from when the CEC	QA lead ager	ncy approves the project, or (2) 180 days of
the date the application was deemed "comple	te" by the SWRCB/RW	QCB; whichever is lo	nger)	
TYPE OF CEQA DOCUMENT (EIR, Negative	Declaration, Notice of	Exemption)	LEAD A	GENCY
STATE CLEARING HOUSE NUMBER	STATUS (per	nding, complete, etc.)	) DA	ATE COMPLETED (or anticipated date)
	Ale and a second state of the second state of	4. d	· · · · ·	and a state to the second floor and the second state of the second
related to the proposed project, or that may in	ner projects implement	ted within the past 5	years or plai	nned within the next five years that are
			pages as lie	DATE
Watland anotion to mitigate	Soo attached 1	$\sum_{n=1}^{\infty} \sum_{i=1}^{\infty} \sum_{j=1}^{\infty} \sum_{i=1}^{\infty} \sum_{i$	toilad	
we trand creation to mitigate	See allached	NIVIIVIP IOF a de	laneu	May 16, 2025-October 14
impact on an existing	proje	ct description.		2025
driveway on a residential				2025
nroperty				
property.				

#### **SECTION Four – Affected Waters and Mitigation**

Please refer to the provided Project Plan Checklist – Attachment A for guidance and attach additional supporting documentation as necessary. Supplying detailed information will aid in expediting the review process.

#### AQUATIC RESOURCE DELINEATION INFORMATION

NAME OF PERSON DELINEATING EXTENT OF WATERS OF US AND STATE Sarah Bradley Contractor's License #1118278 & General A & C-12	DATE(S) OF AQUATIC RESOURCE DELINEATION August 11, 2024
TITLE CEO/Principal Biologist	DATE OF WETLAND VERIFICATION BY U.S. ARMY CORPS – IF APPLICABLE
AFFILIATION Dark Gulch LLC, Environmental Consul>ng and Water Works	An aquatic resource delineation map should be submitted identifying all waters of the US and State that would be impacted or avoided. If a wetland delineation has been verified by the U.S. Army Corps, please submit the verification letter as well as a verified wetland delineation map.

#### PROJECT HYDROLOGIC INFORMATION

Receiving Water(s) impacted:

Hydrologic Unit(s):

Water Body Type(s):

Creation of new wetland.

Hydrologic Unit Information can be found at: <u>http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx</u>; or http://www.waterboards.ca.gov/northcoast/water\_issues/programs/basin\_plan/083105-bp/03\_bu.pdf

	<b>DESIGNATED BENEFICIAL USES(s)</b> Please check all that apply.									
AGR		CUL		GWR		NAV		REC-2	WET	
AQUA		EST		IND		POW		SAL	WILD	
ASBS		FISH		MAR		PRO		SHELL	WQE	
COLD		FLD		MIGR		RARE		SPWN		
COMM		FRSH		MUN		REC-1		WARM		

Beneficial Uses are listed within the North Coast Regional Water Quality Control Board Basin Plan available at: http://www.waterboards.ca.gov/northcoast/water\_issues/programs/basin\_plan/

POTENTIAL FOR IMPACTS TO THREATENED AND ENDANGERED SPECIES (Attach all Biological Assessments, Surveys, Formal Consultation Determination letters, and Mitigation Proposals as necessary.)								
SPECIES AND/OR HABITAT	BIOLOGICAL ASSESSMENT (Y/N)	SURVEY CONDUCTED (Y/N)	DATES OF SURVEY CONDUCTED					
n/a as determined by BIOLOGICAL SCOPING SURVEY, WETLAND DELINEATIONS, & BOTANICAL SURVEYS, August 11, 2024.								

**DREDGE AND FILL INFORMATION** (The following must be completed for each action where dredging activities, fill material or other activities (e.g. excavation) will result in disturbance and/or discharge to a wetland or other waterbody. Add rows for multiple types of disturbance within the same waterbody type. Attach additional pages as necessary. Provide maps showing the location of project and of all impacts with the corresponding impacts in the format below. Provide all temporary and permanent impacts to waters of the U.S. and waters of the State.)

of project and of an impacts that the corresp	benang impacte in the format below.	revide all temperary and permai			
<b>TYPE OF WATERBODY</b> (i.e. stream, wetland, ephemeral drainage)	Type of FILL and/or EXCAVATION VOLUME (CUBIC YARDS)	FILL and/or EXCAVATION SURFACE AREA (SQUARE FEET OR ACRE)	FILL and/or EXCAVATION LENGTH (LINEAR FEET)	DREDGE VOLUME (CUBIC YARDS)	TYPE OF IMPACT (Temporary* or Permanent**)
Waters of the US – Fed jurisdiction					
□ Wetland					
□ Stream channel (OHWM and below)					
□ Lake/Reservoir					
□ Ocean/Estuary/Bay					
□ Other					
Sub-total Waters of the U.S.					
Waters of the State only					
X Riparian area	No external fill will be placed. The existing contour of the land will be graded. Grading will be conducted on 0.122 acres to create a naturally appearing depression in the land that collects seasonal rainfall and promotes the natural growth of native wetland vegetation. Assuming the depth of this depression to be between ½ foot to 1 foot, then the volume is approximately between 90 and 180 cubic yards.	0.122 acres	A circular depression will have 258 linear feet.	X	Permanent
□ Stream channel/bank (Above OHWM)					
□ Vernal Pool or isolated wetland					
□ Spring/Seep/Headwaters					
□ Other					
Sub-total Waters of the State					
Total Waters of U.S. and State	180 cubic yards (maximium)	0.122 acres (5,314.32 square feet)	258 linear feet	X	Permanent

# WATER QUALITY IMPACT DESCRIPTION

rt tha

nature and extent of t

pollutants, and beneficial uses associated with the proposed project. Attach a map that clearly depicts the anticipated area of proposed Permanent and Temporary direct impacts overlaying on the aquatic resources)
Naturally occurring rain water will be captured through a graded depression in the land to promote vegetation growth. The water quality not be impacted.
AVOIDANCE OF DIRECT Dredge/Fill/Excavation IMPACTS (Attach additional information if necessary) Describe the actions taken to avoid and minimize direct impacts to waters of the U.S. and State pursuant to the Procedures section IV.A.1.h and IV.B.). Attach additional pages as necessary.
Direct impacts to waters of the U.S. and State will be avoided. The new wetland will be created adjacent to these waters.
ALTERNATIVES ANALYSIS Has an Alternatives Analysis (A.A.) been prenared?
If no, list exemption that applies
AVOIDANCE OF INDIRECT IMPACTS (Attach additional information if necessary)
(1) Describe the methods proposed for erosion control and re-vegetation, including winterization strategies to stabilize all bare soils.
The graded area will be planted at the beginning of the season, which will establish growth before the winter season.
(2) Submit a map indicating the approximate locations and area of soil, land, and vegetation disturbance and proposed best management practices.
See attached RMMP.
(3) Describe the methods proposed to reduce sources of pollutants such as petroleum hydrocarbons, oil and grease, fertilizers, pesticides, sediment, etc., from entering the water system
None of these pollutant are present on the site.
(4) Describe any additional efforts to monitor, avoid and minimize potential indirect impacts to waters of the U.S. and State which might affect water quality.

# Water Quality Monitoring, Diversions and Dewatering

Does the proposed project include any dewatering, work in standing or flowing water, and/or constructing diversions of water? 

YES X NO

If yes, a water quality monitoring plan to monitor compliance with water quality objectives of the applicable water quality control plan may be required.

# Describe the water diversion and dewatering plan, or indicate where information is located within an attachment (Procedures section IV.A.2.c):

If there are discharges to detention ponds or upland treatment facilities (such as temporary settling basins, filter bags, storage and/or treatment containers, etc.) then include their location and indicate if detention pond or treatment facility is on-site or off-site; if there are stream-channel diversions, include estimated flow rates, diversion system capacity, location, including upstream diversion points and downstream discharge point, and a diversion plan that provides measures to prevent erosion and turbidity, maintain fish passage, etc. If there are proposed discharges of water to surface waters, include receiving water body name, estimated volume, flow rates and proposed management measures.

n/a

# **Ecological Restoration and Enhancement Projects**

Is this application for a project that meets the definition of an Ecological Restoration and Enhancement Project (Procedures section V)? 
VES X NO

Applications for Ecological Restoration and Enhancement Projects require a Draft Assessment Plan including information outlined in Procedures section IV.A.2.e. The Plan shall include: project objectives, description of performance standards to attain objectives, protocol and timeframe for conditions assessment and monitoring schedule.

Please identify the name and location of Draft Assessment Plan:

#### **TEMPORARY IMPACT Draft Restoration Plan**

A draft restoration plan for restoring temporarily impacted areas to project restoration or enhancement objectives is required per Procedures section IV.A.2.d and should include where applicable: project objectives or outcomes for restoration or enhancement, description of performance measures and standards used to evaluate attainment of objectives, protocols for assessment, the timeframe and responsible party for performing assessment monitoring and reporting to resource agencies. Other plan components may include: project need and basis of design, project objectives, plans for grading impacted areas to pre-project contours, a planting palette with plant species native to the area, seed collection locations, an invasive species management plan. When passive restoration is proposed, a draft restoration plan should include an explanation of how passive restoration will restore the area to proposed objectives, assessment components, and an estimated date for expected restoration.

Please identify the name and location of Draft Restoration Plan:

**PERMANENT IMPACT MITIGATION INFORMATION** (Pursuant to Executive Order W-59-93, the wetlands "No Net Loss Policy", the Regional Water Board requires a mitigation plan for permanent impacts to wetlands and waters. When permanent impacts to Wetlands and waters of the state occur a Draft Compensatory Mitigation Plan developed using a watershed approach is required as described in Procedures section IV.A.2.b. Address all project impacts in the Dredge and Fill Table and describe the applicable mitigation. Provide the location, size, type, functions, and values of the proposed mitigation. Describe success criteria, monitoring, long-term funding, management, and site protection instrument for the mitigation site. Attach Mitigation Bank Bills-of-Sale for purchase credits if applicable. For guidance on a complete mitigation plan see Attachment B- Stream and Riparian Area Mitigation Checklist and Attachment C - Wetland Mitigation Checklist. If application check lists are not completed or incorporated into the mitigation plans the application may be deemed incomplete or denied.

*Does the project permanently impact wetlands?* X NO YES (If yes complete mitigation information table Option 1 and/or Option 2, and attach mitigation plan or bank credit bill of sale).

MITIGATION SUMMARY (Provide brief summary of mitigation proposal, references attached documents, sections, page numbers, etc.)

Mitigation Site Location(s):

Mitigation Site Lat/Long(s):

Name of Watershed & Hydrologic Unit:

Mitigation Site City and County:

Mitigation Project Summary:

Climate Assessment if necessary (see Procedures section I.V.A.2.b.viii)

Option 1 - Applicant Provided Mitigation Information								
Waterbody Type	Acres / Li Estab	inear Feet lished	Acres / Linear Feet Restored		Acres / Linear Feet Enhanced		Acres / Linear Feet Preserved	
Wetland								
Stream								
Riparian								
Vernal Pool								
Lake								
Other								
		Ор	otion 2 - Miti	gation Bank	Credits			
Waterbody Type	Acres / Li Estab	inear Feet lished	Acres / Linear Feet Restored		Acres / Linear Feet Enhanced		Acres / Linear Feet Preserved	
Wetland								
Stream								
Riparian								
Vernal Pool								
Lake								
Other								
Mitigation Bank Name:	Mitigation Bank Name:							
Name of Mitigation Bank	COperator:							

# **SECTION FIVE – Low Impact Development**

The State Water Resources Control Board Resolution (SWRCB) No. 2008-0030 "Directs Water Boards' staff to require sustainable water resources management such as Low Impact Development (LID) and climate change considerations, in all future policies, guidelines, and regulatory actions." For reference please refer to the SWRCB LID webpage at http://www.swrcb.ca.gov/water\_issues/programs/low\_impact\_development/index.shtml

#### SUB-SECTION (A) DOES THE PROPOSED PROJECT:

- 1) Increase and/or replace 5,000 square feet or more of impervious surface? X NO I YES Total impervious surface added:\_\_\_\_\_\_ Total impervious surface replaced:\_\_\_\_\_\_
- 2) Discharge Stormwater to an Area of Special Biological Significance? X NO 

  VES
- 3) Discharge stormwater to a water body listed as impaired on the Clean Water Act 303 (d) list? X NO 🛛 YES
- 4) Discharge stormwater within a watershed with a total daily maximum load (TMDL)? X NO D YES
- 5) Construct a new stormwater outfall to state waters, excluding outfall replacements? X NO D YES

#### If you checked YES to any question 1-5 above, complete the remainder of this checklist including Sub-Section B

6) Implement post-construction stormwater control measures per Phase I, II, or CGP permit requirements? X NO 
VES – If YES, attach your stormwater mitigation plan and provide all information requested in Sub-Section B

# SUB-SECTION (B)

#### POST-CONSTRUCTION STORM WATER CONTROL REQUIREMENTS

Provide a summary for staff review of the methods proposed to treat and retain storm water from the project site prior to entering the storm drainage system and/or waters of the State. Attach detailed responses to the question below and relevant design information and calculations.

- 1) Identify proposed site design and structural stormwater control measures to retain and treat stormwater runoff.
- 2) Include design calculations to indicate that the proposed methods will comply with either the Phase I or Phase II MS4 permit, or the CGP post-construction requirements, as appropriate. Projects not otherwise subject to the post-construction requirements of these permits shall treat and retain the runoff from the 85th percentile/24-hour storm event, or one-inch of rainfall/24-hours. Projects within the Russian River watershed and not within the Phase II MS4 permit boundary shall use the City of Santa Rosa Storm Water Calculator, design criteria, and approved stormwater control measures at www.srcity.org/stormwaterLID.
- 3) Provide maps that illustrate the project drainage patterns, watershed catchments, and overall design details of the appropriate storm water control measures.
- 4) Provide the dimensions of the proposed stormwater control measures (slopes, width, length, depth) and specific calculations for velocity, volume treated, residence time, depth of flow, etc.
- 5) Provide information on the soil type underlining infiltrative stormwater control measures and the associated vegetation type(s).
- 6) For projects adding and/or replacing one acre or more of impervious surface, describe LID measures to meet hydromodification requirements of the appropriate MS4 Permit. If the project is not in an MS4 jurisdictional boundary, and where the post-project hydrograph would exceed the pre-project hydrograph by 10 percent or more for the 2-year 24/hour storm event in volume and/or time of concentration, describe LID measures to correct the hydrograph.
- 7) Provide the post-construction stormwater control operations and maintenance plan.

n/a

#### SECTION SIX – Waste Disposal

Pursuant to California Water Code 13260 and California Code of Regulations Title 27, which regulate land disposal activities, the Regional Water Board requires proof that placing non-hazardous waste or inert materials (which may include discarded product or recycled materials) will not result in degradation of water quality, human health or the environment. Degradation of water quality can be defined in terms of beneficial uses and/or in terms of numerical or narrative limits adopted to protect those uses.

DESCRIBE THE TYPE OF WASTE GENERATED BY THE PROPSED PROJECT (such as dredge spoils, excess soil, construction and demolition debris, excess slurries, grindings, concrete contact water, etc.)
n/a
<b>PROPOSED WASTE DISPOSAL</b> (Describe the methods proposed to handle and dispose non-hazoudous and hazardous materials, or present plan to reincorporate or recycle excess materials)
n/a

#### **SECTION SEVEN – Application Signature**

Application is hereby made for a permit or permits to authorize the work described in this application. I certify, under penalty of perjury, that this application is complete and accurate to the best of my knowledge. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant. In addition, I certify property owner responsibility and liability for compliance with permit conditions issued for this project for compliance with any future authorization or amendments thereto.

Martin Christian Reimann and Oliver Siegfried Schilke

PRINT NAME AND TITLE OF APPLICANT (Property Owner)

PRINT NAME OF APPLICANT (NOT THE AUTHORIZED AGENT)

Minthi Shr

SIGNATURE OF APPLICANT

PRINT NAME AND TITLE OF AGENT (if applicable)

11/2/2024

DATE

DATE

SIGNATURE OF AGENT

- 11 -

NCRWQCB Revised December 10, 2020. Questions, contact the 401 Certification Unit Supervisor at (707) 576-2220. To download this form in MS Word visit https://www.waterboards.ca.gov/northcoast/water issues/programs/water quality certification/

# Attachment A - Project Plan Checklist

A detailed project plan is required with every application. Clarification of information may be requested by Regional Water Quality Control Board (Regional Water Board) staff during application review. This checklist is provided to aid applicants in providing a thorough project plan. Not all items on the checklist apply to each and every project, rather they are to be used as general guidelines for required information to be included. In addition, there may be items <u>not</u> covered on this checklist that may be requested on a project by project basis.

# **Project Description**

X Project Description

- X Summary of overall project area (i.e., housing subdivision, highway widening)
  - Size and description of project area; type(s) of receiving water body(ies); brief list/description of applicant's previous and future projects related to the proposed activity or that may impact the same receiving water body(ies)
- X Responsible Parties
  - Names and phone numbers of anyone participating in the project
- X Jurisdictional Waters to be impacted
  - Include a detailed site plan clearly indicating proposed impacts and mitigation site areas, including acreages
- X Type(s) of water body, flow duration (i.e. intermittent/perennial), inundation period, functions and values
- X Location and size of project area
- X Include site map and regional map of project location
- X Species present within project site and/or upstream/downstream
- X Threatened or endangered species present
- X Existing functions, values, and condition of resources
  - Physical, hydrologic, and biological attributes, substrate composition and condition, complexity, effective shade, canopy cover,
- X Current conditions at the site (mostly natural, degraded, heavily impacted)
- X Construction methods to be used
- X Adverse impacts
  - Include whether the adverse impacts will be temporary or permanent, and include amount of area to be affected (acres or linear feet)
- X Schedule of construction activities
  - Include start and end dates for proposed activities
- □ Stockpile summary
  - Include amount of stockpile and proposed areas for storage
- X Best management practices
  - Practices to be implemented to reduce potential water quality impacts during and after construction activities, aside from proposed mitigation activities
- Site dewatering
- Solid waste disposal for dredged or excess construction/demolition materials
  - X Mitigation and monitoring plans (refer to Stream, Riparian, and Wetland Mitigation Checklists)

# Attachment B - Stream and Riparian Mitigation Checklist

If it is determined that a watercourse (intermittent and/or perennial) or vegetation within the riparian area will be permanently impacted by the proposed project, mitigation will likely be necessary to preserve the function and beneficial uses of the site. Clarification of information may be requested by Regional Water Board staff during application review. This checklist is intended to aid applicants in submitting complete and proper information regarding mitigation plans, to enable staff to effectively evaluate the project for Water Quality Certification or Waste Discharge Requirements. Not all items on the checklist apply to each and every project, rather they are to be used as general guidelines for needed information to be included. In addition, there may be items <u>not</u> covered on this checklist that may be requested on a project by project basis. Also see Procedures.

#### 1) Goals of Mitigation

- Use a watershed approach to evaluate environmental effects of project and create mitigation that supports the sustainability or improvement of aquatic resources in a watershed.
- □ Variety of habitats to be created/restored
  - Pools, rearing sites, spawning sites, riparian habitat, etc.
- Functions and values of habitat to be created
  - Wetted channel width, pool/riffle ratio, mean/maximum depths, complexity, substrate composition, effective shade, canopy cover, large woody debris recruitment, etc.
- Other mitigation steps taken
  - Avoid, minimize, compensate
- Functions and values of the created/restored habitat
  - Wildlife habitat, streambank stabilization through riparian habitat establishment, water quality improvement, etc.
- **G** Schedule for mitigation implementation, monitoring and reporting
- □ Work plan
  - Project start date; length mitigation activities will take place; specific work to be done at particular times, area of stream-channel profile receiving mitigation

#### 2) Proposed Mitigation Site

- Location and size of mitigation area
- Include site map and regional map of mitigation project
- Existing functions and values
- Current conditions at the site (mostly natural, degraded, heavily impacted)
- If the site is degraded, explain past uses and land stressors leading to degradation
- Present and proposed uses of mitigation area
  - Provide habitat for flora/fauna (plants/animals), recreation, open space, etc.
- Current uses of the area
  - Agriculture, development, recreation, open space, etc.
- Assessment of reasonably foreseeable impacts to the compensatory mitigation associated with climate change, and any measures to avoid or minimize those potential impacts, See procedures.

#### 3) Implementation Plan

- Responsible Parties
- □ Rationale for expecting success

- Site Preparation Plan
- Planting Plan
  - Dates of proposed plantings, native species to be planted, density of plantings, etc.
- Irrigation Plan (if applicable)
- Timetable for implementing the compensatory mitigation plan

#### 4) Maintenance During Monitoring Period

- Responsible Parties
- □ Maintenance activities
- Names and phone numbers of anyone performing maintenance activities at or near the site
- □ Schedule

#### 5) Monitoring Plan

- Responsible Parties
- Names and phone numbers of individuals/contractors performing monitoring duties
- Performance Criteria
  - Physical, hydrologic, and biotic attributes, plant survival, plant health, percent native and/or invasive, increase in percent effective shade, substrate composition and/or condition,
- How will success be judged?
  - Increase in pool depths, decreased erosion rates, establishment of riparian species, recruitment of flora and fauna, increased pool/riffle ratio, increased shade, decreased water temperatures, increased water quality, increase in biotic diversity or structure, hydrologic improvements, and/or improvements in physical structure condition, etc.
- □ Is there a reference site?
  - If a reference site is incorporated in the plan, include where it is located and what the current conditions are (see performance criteria above)
- Monitoring methods
  - Describe in detail how the site will be monitored
- □ Reports
  - Detail a reporting program and schedule
- □ Schedule
  - How often will the site be monitored? How long will the site be monitored?

#### 6) Completion of Mitigation

- Notice of completion (i.e. agencies to be contacted)
- Regional Board confirmation

#### 7) Final Success Criteria

- Target functions and values achieved
  - Ultimate target functions and values or condition of the mitigation (i.e. wetted channel width, pool/riffle ratio, complexity, canopy cover, effective shade, flora/fauna recruitment, physical structure, biotic structure, hydrology, etc.)
- Target hydrologic scheme achieved
  - Wetted width, bankfull width, mean/maximum depths, flow regime, etc.
  - What are the ultimate hydrologic conditions for the site?
    - Based on conditions prior to any degradation or human impacts (best case scenario)
- Target jurisdictional acreage created/restored
- Total acres restored or created through mitigation project

- Establishment of native riparian species
  - Based on monitoring, reviewed after determined number of years

# **Attachment C - Wetland Mitigation Checklist**

Wetlands should not be disturbed if at all possible. If it is determined that a wetland will be permanently impacted by the proposed development, mitigation will need to be done a ratio to meet regulatory requirements to establish, restore, enhance or preserve the functions and values of wetlands and associated beneficial uses. Clarification of information may be requested by Regional Water Board staff during application review. This checklist is intended to aid applicants in submitting complete and proper information regarding mitigation plans, to enable staff to effectively evaluate the project. Not all of the items on the checklist will apply to each and every project, rather they are to be used as general guidelines for needed information to be included. There may be items <u>not</u> covered on this checklist that may be requested on a project by project basis. Also, see Procedures.

#### 1) Goals of Mitigation

X Use a watershed approach to evaluate environmental effects of project and create mitigation that supports the sustainability or improvement of aquatic resources in a watershed.

X Variety of habitats to be created/restored

• What type of wetland will be created/restored? (i.e. seasonal, freshwater, saltwater, swale, vernal pool, etc.)

X Functions and values and/or condition of habitat to be created

• What are the functions and values and/or of the created/restored wetland? (i.e. wildlife habitat, native plant communities, increased water quality, physical structure, biotic structure, etc.)

X Create the appropriate size and type of wetland feature to meet regulatory requirements (consult procedures and staff)

X Time schedule for mitigation

X Work plan

• Project start date; length mitigation activities will take place; specific work (exotic species removal, native species plantings, etc.) to be conducted during particular times of the year

#### 2) Proposed Mitigation Site

X Location and size of mitigation area

- X Include site map and regional map of mitigation project
- X Existing functions and values
  - What are the functions and values and/or of the created/restored wetland? (i.e. wildlife habitat, native plant communities, increased water quality, physical structure, biotic structure, etc
  - Include a copy of delineation report of mitigation site
- X Current conditions at the site (mostly natural, degraded, heavily impacted)
- X If the site is degraded explain past uses and current land stressors leading to degradation
- X Present and proposed uses of mitigation area
  - Provide habitat for flora/fauna, recreation, open space, etc.

X Current uses of the area

XAssessment of reasonably foreseeable impacts to the compensatory mitigation associated with climate change, and any measures to avoid or minimize those potential impacts, see procedures.

#### 3) Implementation Plan

X Responsible Parties

X Rationale for expecting success

- X Site Preparation Plan
- X Planting Plan

• Dates of proposed plantings, native species to be planted, density of plantings, etc.

X Irrigation Plan (if applicable)

X Timetable for implementing the compensatory mitigation plan

#### 4) Maintenance During Monitoring Period

X Responsible Parties

- X Maintenance activities
- X Names and phone numbers of anyone performing maintenance activities at or near the site
- X Schedule

#### 5) Monitoring Plan

- X Responsible Parties
- X Names and phone numbers of individuals/contractors performing monitoring duties
- X Performance Criteria
  - Percent native species duration and season of water inundation, hydrology, physical structure, biotic structure, percent native/invasive, etc.
- X How will success be judged?
  - Establishment of native flora/fauna, ponding of water during appropriate portion of season, increased water quality, improvement of condition, etc.
- X Is there a reference site?
  - If a reference site is incorporated in the plan, include where it is located and what the current conditions are (see performance criteria above)
- X Monitoring methods

   Describe in detail how the site will be monitored
- X Reports
  - Detail a reporting program and schedule
- X Schedule
  - How often will the site be monitored? How long will the site be monitored?

#### 6) Completion of Mitigation

- X Notice of completion (i.e. agencies to be contacted)
- X Regional Board confirmation

#### 7) Final Success Criteria

X Target functions and values

- Ultimate target functions and values and/or condition of the mitigation (i.e. native flora/fauna recruitment, inundation of water during appropriate season, biodiversity, special species habitat)
- X Target hydrologic scheme
  - Inundation period of area

X What are the ultimate target conditions for the site?

- Percent native species duration and season of water inundation, hydrology, physical structure, biotic structure, percent native/invasive, water quality improvement, etc.
- X Target jurisdictional acreage to be created/restored
- X Total acres restored or created through mitigation project
- X Establishment of native wetland species
  - Based on monitoring, reviewed after determined number of years

# BIOLOGICAL SCOPING SURVEY, WETLAND DELINEATIONS, & BOTANICAL SURVEYS

for

2300 N Hwy 1 Albion, California 95410

APN: 123-290-03 Mendocino County

Property Owners: Martin Christian Reimann and Oliver Siegfried Schilke PO Box 331 Albion, California 95410-0331

Prepared By: Sarah Bradley, CEO/Principal Biologist Dark Gulch LLC, Environmental Consulting and Water Works PO Box 14, Fort Bragg CA 95437 DarkGulch.com Sarah@darkgulch.com (707)734-0922 Contractor's License #1118278 & General A & C-12

Updated Version: August 11, 2024

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## **1. PROJECT SUMMARY**

A forensic wetland delineation and a floristic botanical presence/absence survey were conducted on the subject parcel identified by Assessor's Parcel Number (APN) 123-290-03 between March and June by Dark Gulch LLC, Environmental Consulting and Water Works. These efforts were undertaken to assess the current hydrological and ecological status of the parcel in question. This project complements the earlier comprehensive biological scoping survey, which was executed in May 2023 by the same firm (Appendix A).

The objective of this investigation was threefold:

First, this investigation aimed to revisit and evaluate the findings of the 1998 report titled "Delineation of Potential Jurisdictional Wetlands and Waters of the United States" by Wetlands Research Associates, Inc., as well as the "Botanical Survey" conducted in 1996 by Gordon E. McBride, Ph.D., Botanical Surveys. In addition, another wetland delineation of the subject parcel from 2007 titled "Wetland Delineation Subject to the California Coastal Act and the Mendocino County Local Coastal Program" by Redwood Coast Associates was scrutinized. The purpose was to verify or challenge previous wetland delineations and floristic botanical findings concerning the subject parcel.

Second, this investigation sought to identify any new Environmentally Sensitive Habitat Areas (ESHAs) that may have emerged since the last assessments. This includes the presence of special-status plants and plant communities, wetlands and riparian zones, as well as habitats of special-status wildlife. The findings aim to ascertain whether these areas would be directly or indirectly impacted by proposed or existing developments on the parcel.

Three, this investigation addresses the Recommendations made by the North Coast Regional Water Quality Control Board in its letter from April 26, 2024 and its results are intended to ensure compliance with the California Water Code and the Clean Water Act.

This investigation was carried out in strict adherence to the current regulatory frameworks and guidelines. This includes compliance with the Mendocino County Local Coastal Program (LCP) at the county level, the California Environmental Quality Act (CEQA), the California Water Code (CWC), the California Coastal Act (CCA), and relevant sections of the California Fish and Game Code at the state level, and the Clean Water Act (CWA) at the federal level. The wetland delineation was performed to meet the definition of the State of California, including a mapping of all of potential waters of the State of California and the United States. The wetland delineation followed the methodology prescribed by the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). The

botanical survey was conducted in accordance with the Mendocino County Local Coastal Program (LCP) and the California Native Plant Society's survey protocols.

Through these rigorous scientific and regulatory compliant approaches, this report aims to provide an accurate and up-to-date hydrological and ecological evaluation of the subject parcel in light of the proposed and existing development. The proposed development consists of:

A 2,000-sqft limited-density rural dwelling;

A 744-sqft garage/accessory dwelling unit; and

A 421-sqft storage shed (see locations in Figure 1).

The existing development consists of:

An operational PG&E transformer, meter main, two subpanels, and underground electrical utilities;

Two operational residential wells, water storage tanks, and underground fresh water utilities;

An operational aerobic septic system; and

An operational driveway running from the property entrance encroaching on the Shoreline Highway to the proposed residential development sites (see locations in Figure 1).

This document includes the findings of the wetland delineation and a floristic botanical presence/absence survey, alongside the "*Biological Scoping Survey*" conducted by Dark Gulch LLC (see Appendix A). It also includes the 1998 "*Delineation of Potential Jurisdictional Wetlands and Waters of the United States*" analysis undertaken for the subject parcel by Wetlands Research Associates, Inc., and the "*Botanical Survey*" completed by Gordon E. McBride, Ph.D., Botanical Surveys (see Appendix B) as well as the 2007 "*Wetland Delineation Subject to the California Coastal Act and the Mendocino County Local Coastal Program*" completed by Redwood Coast Associates (see Appendix C). These extant reports have been prepared in accordance with the requirements set forth by the Mendocino County Local Coastal Program, California Coastal Act, and the Clean Water Act, and are based on the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual.

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# Figure 1: Locations of Existing and Proposed Developments

Sources: Elemental + Sparano & Mooney Architecture; Forrest Francis Surveyor, Mendocino, California (https://www.mendocinosurveyor.com) Scale: 1''= 40'

The subject parcel under study is situated roughly 1.3 miles south of the Albion River Bridge (depicted in Figure 2) and to the west of the Shoreline Highway. This 12.52-acre property is accessible through a private entrance off the Shoreline Highway.

Sarah Bradley, the principal biologist at Dark Gulch LLC, conducted ESHA wetland delineations and botanical surveys between March and June 2024, dedicating approximately 24 personhours to these efforts. One category of presumed ESHA was identified within the study area, verifying the extant wetlands delineation by Wetlands Research Associates, Inc. and Redwood Coast Associates, as well as the botanical findings of Gordon E. McBride, Ph.D., Botanical Surveys (see Figures 3, 6, and 10, as well as Appendices B and C):

**Seasonal Wetland ESHA** – Two large swales were identified, which run from the southeast corner of the study area to the north west corner. The swales include a vegetated drainage that ranges between 2 to 4 feet in width. The principle hydrological sources for the study area are precipitation, groundwater, surface run-off, and seasonal water flow from on-and-off site sources.

This comprehensive analysis by Dark Gulch LLC represents our expert judgment, extensive research, and data collection efforts. Throughout the project, collaborative consultations were held with Dark Gulch LLC, the property owners, andthe County of Mendocino, the California Coastal Commission, the California Department of Fish and Wildlife, and the California North Coast Regional Water Quality Control Board. These interactions, including site visits on February 21, 2024, and March 27, 2024, provided an opportunity for these agencies to establish own recommendations, confirm demarcations of sensitive areas, and suggest appropriate measures for avoidance and protection.



Figure 2: Location Map of Subject Parcel

Source: Elemental + Sparano & Mooney Architecture Scale: 1''= 5000'



Figure 3: Presumed Seasonal Wetland ESHA & Existing and Proposed Development

## 2. PROJECT DESCRIPTION

The proposed development is to build a 2,000-sqft limited-density rural dwelling and a 744-sqft garage/accessory dwelling unit, and to connect these dwellings to the operational aerobic septic system, wells, water storage tanks, and underground electrical utilities. The proposed development is also to build a 421-sqft storage shed. Figure 1 shows the footprint of the proposed development and Figure 3 depicts the presumed seasonal wetland ESHA in relationship to both existing and proposed development.

## **3. STUDY AREA DESCRIPTION**

## 3.1. General Site Description

The subject parcel is a combined 12.52 acres in size and the study area was focused on a 100ft buffer area around the existing and proposed development (approximately 5 acres). The property is on a coastal terrace that slopes downward toward its western edge.

#### 3.2. Land-Use History

The subject parcel has been under development for at least four decades, at least going back to the times around the Vested CDP# 1-81-85. Figure 4 depicts a satellite image from 2005, showing two driveways in place. In addition, in the mid-2000s, the subject parcel prepared for a parcel split with a second proposed single-family residence to be built in the northeastern corner of the property, necessitating driveway access along a north-south axis (CDP# 67-2006). Figure 4 depicts staging in the northeastern corner and improvements to the driveway along the north-south axis. Historic use of the subject parcel was most likely agricultural grazing, based on land use of the surrounding parcels. No evidence of historic logging exists, based on absence of large tree stumps throughout the parcel.

Figure 5 (Panel A) depicts the wetland delineation map prepared by Wetlands Research Associates, Inc. (also see Appendix B) as well as a recent satellite image from 2023, showing the existing driveway (see Figure 5, Panel B).

In Figure 6, the wetland delineation map prepared by Wetlands Research Associates, Inc. is overlaid over both the 2005 satellite image (see Figure 6, Panel A) and the 2023 satellite image (see Figure 6, Panel B). Panel B demonstrates that the existing driveway was historically placed in areas to avoid presumed ESHA wetlands.



Figure 4: Shoreline Highway Encroachment and Historical Driveway Development

Satellite image of subject parcel APN 123-29-03 with Shoreline Highway encroachment and driveways Image source: USDA/FPAC/GEO satellite Image date: 6/11/2005



Figure 5: 1998 Wetlands Delineation and Existing Driveway

Image source: Airbus Image date: 10/3/2023



# Figure 6: Existing Driveway (Panel B) Avoids 1998 Wetlands Delineations

Panel A: Wetland delineation with respect to 2005 satellite image of subject parcel Image source: Wetland Research Associates, Inc. and USDA/FPAC/GEO satellite Image date: 6/11/2005 (overlay represents an approximation)



Panel B: Wetland delineation with respect to 2005 satellite image of subject parcel Image source: Image source: Wetland Research Associates, Inc. and Airbus Image date: 10/3/2023 (overlay represents an approximation)

## 3.3. Topography and Soils

The elevation of the study area is approximately 140-240 feet above sea level. Different soil types have been identified and mapped in 2023 by Brunsing Associates, Inc. in a full geotechnical investigation of the subject parcel: "The bedrock is overlain by Pleistocene terrace deposits of approximately 20 feet in thickness which constitute the upper bluff. These deposits have eroded to form a moderate slope which extends to the steeper bedrock bluffs below and is well vegetated. The terrace deposits are blanketed by 2 to 4 feet of topsoil consisting of dark brown, soft sandy silts which were porous with roots. The silts appear to be of low plasticity and of low expansion potential (tendency for soil volume change with changes in moisture content). Underlying the topsoil, our exploration encountered orange-brown silty sands and clean sands (less than 5% fines) which extend to the maximum depth explored (16.5 feet). The sands are loose to dense and fine grained with few coarse sands. In general, the top two feet of these sands (underlying the topsoil) were loose, the underlying material is medium dense to dense. [..] No active landsliding or erosion were observed on the property bluffs. In general, the upper terrace deposits appear to be currently stable and well vegetated. The lower bluffs appeared generally stable with minor evidence of sloughing observed within the dark gray sandstone which forms the lower bluffs."

The Soil Survey of Mendocino County, California, Western Part identifies the soil type as 145 – Flumeville clay loam, 5 to 15 percent slopes. This soil type is typically dark grey clay loam at the surface, with a subsoil that is grayish brown clay loam. The lower 36 inches is light gray and white clay that has strog brown mottles. Typically this soil type is used for livestock grazing, hay pasture or wildlife habitat.

# 3.4. Climate and Hydrology

The Mendocino Coast has a Mediterranean climate with average annual precipitation of 40.24 inches (WRCC, Station Fort Bragg 5N, average for years 1895-2016), with the majority of rain occurring in winter months (November through March).

The U.S. Fish & Wildlife Service's National Wetlands Inventory was consulted in April 2024 and showed a wetland running to the north of the subject parcel (see Figure 7). No other wetlands have been identified in the National Wetlands Inventory on the subject parcel.

During field work, a seasonal wetland was observed with water flowing through culverts under the Shoreline Highway and onto the subject parcel, as identified in extant wetland delineations of the subject parcel. An forensic wetland delineation was conducted and is described in Section 5.


### Figure 7: Wetland Identified in the National Wetlands Inventory

#### 3.5. Vegetation and Natural Communities

The majority of the study area is vegetated with sweet vernal grass (*Anthoxanthum odaratum*), slough sedge (*Carex obnupta*), horsetail (*Equisetum telemateia*), salal (*Gaultheria shallon*), Monterey cypresses (*Cupressus macrocarpa*), and Monterey pine (*Pinus radiata*). The presumed ESHA wetland contains overwhelmingly of slough sedge (*Carex obnupta*) and horsetail (*Equisetum telemateia*). Landscaping for agricultural purposes (fruit trees) and windbreaks with Leyland cypresses (*Leylandii* spp.) are present in select areas. Figure 8 illustrates vegetation and natural communities.

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Figure 8: Vegetation Map



# 3.6. Adjacent Lands

Lands surrounding the study area include residential development with similar habitat.

### 3.7. Existing Development

The surrounding properties to the north, south, and east are used for residential purposes. The existing development on the subject parcel includes two residential wells, an aerobic septic system, underground electrical and water utilities, and access driveways and were permitted under Vested CDP# 1-81-85 and CDP# 67-2006.

In particular, along the existing driveway, a PG&E transformer, meter main, two subpanels, electrical utilities, and underground irrigation have been permitted, were completed, and were then inspected by the County of Mendocino Department of Planning and Building Services under Permit #BF\_2019-0593, per Vested CDP# 1-81-85.

Shoreline Highway encroachment and existing driveway improvements have been permitted by the State of California Department of Transportation under Permit# 0119-6-RS-0443 and have been approved in line with the stipulations of the County of Mendocino Department and the State of California Department of Forestry and Fire Protection under Permit# 114-22.

An operational aerobic septic system has been permitted under the Vested CDP# 1-81-85, was professionally designed by David R. Miller of Willits, California, was professionally installed by Redwood Valley Gravel Products Inc., and was then inspected and approved by the County of Mendocino Division of Environmental Health under Permit# ST25022.

# 4. METHODOLOGY

## 4.1. Maps and Scoping Tables

Maps and scoping tables were created for the special-status plant species and wildlife with the potential to occur in the study area by reviewing the most up-to-date species lists for the California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS).

For purposes of this investigation, special-status plant species are vascular plants that are (1) designated as rare, threatened, or endangered by the state or federal governments; or (2) are proposed for rare, threatened, or endangered status; and/or (3) are state or federal candidate species, and/or (4) considered species of concern by the U.S. Fish & Wildlife Services and/or (5) are included on the California Rare Plant Rank (CRPR).

The California Natural Diversity Database (CNDDB) was used to obtain records within nine 7.5 minute quad maps of the study area (see Figure 9) and to compile both a map and lists of special-special status plants and animals with the potential to occur in the study area (see Figures 9 and 10). The CNDDB is a database providing location and natural history information on special-status plants, animals, and natural communities. The obtained lists were not limited to species listed in this document, it includes all species indicated by a search of all quads (i.e., Albion and Elk quads) with similar geology, habitats, and vegetation to those found in the study area. Because the CNDDB is limited to reported sightings, it is not a comprehensive list of plant species that may occur in a particular area. However, it is useful in refining the list of special-status plant species that have the potential to occur on a particular site.



Figure 9: Special status plant species found within 5 miles of subject parcel.



Figure 10: Special status animal species found within a five mile radius of subject parcel

## 4.2. Field Work

Principal biologist at Dark Gulch LLC Sarah Bradley conducted a full forensic wetland delineation and a revised floristic botanical presence/absence survey on April 16, April 28 and May 3, 2024, dedicating approximately 16 person-hours to these efforts to compile a floristic list of plants occurring in the study area and to identify any rare resources having the potential to meet the LCP ESHA definitions.

# 4.2.1. Wetland Delineation

The process of wetland delineation began by observing the landscape for signs of surface water and plants adapted to water-rich environments. Detailed evaluations were carried out at specific sampling points, where the presence of wetland soils, water-loving plants, and water sources were examined following the procedures outlined by the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual and the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). The findings for each sampling point are detailed in Appendix D. The sampling points were marked in the field with 24-inch wooden stake with colored flagging and labeled with a Sharpie marker. The location of each sampling point is shown in Appendix Figure A-1. The U.S. Army Corps of Engineers defines wetlands as areas where water-tolerant vegetation, water-influenced soils, and water presence converge. However, within the California Coastal Zone, an area is considered a wetland if it meets any one of the U.S. Army Corps of Engineers' criteria (watertolerant vegetation, water-influenced soils, or water presence). Wetlands reported and mapped in this report are Coastal Act wetlands and may or may not be U.S. Army Corps wetlands.

# 4.2.2. Revised Floristic Botanical Presence/Absence Survey

To guarantee that plants of potential special interest were visible and identifiable, visits were made to offsite reference plant populations before the field surveys of the project. Plants verified at offsite reference sites observed by Dark Gulch during the 2024 botanical seasons included: pink sand verbena (*Abronia umbellata var. beviflora*}, Blasdale's bent grass (*Agrostis blasdal*), pygmy manzanita (*Arctostaphylos nummularia ssp. mendocinoensis*), Point Reyes blennosperma (*Blennosperma nanum var. robustum*), Bolander's reed grass (*Calamagrostis bolanderi*), coastal bluff morning glory (*Calystegia purpurata ssp. saxicola*), swamp harebell (*Campanula californica*), California sedge (*Carex californica*), Lyngbye's sedge (*C. lyngbyei*), deceiving sedge (*C. saliniformis*), Mendocino coast paintbrush (*Castilleja mendocinensis*), Point Reyes ceanothus (*Ceanothus gloriosus var. gloriosus*), Howell's spineflower (*Chorizanthe howellii*), round-headed Chinese-houses (*Collinsia corymbosa*), Oregon goldthread (*Coptis laciniata*), bunchberry (*Cornus unalaschkensis*) supple daisy (*Erigeron supplex*), supple daisy (*Erysimum concinnum*), Pacific gilia (*Gilia capitata ssp. pacifica*), dark-eyed gilia (*G. millefoliata*), short-leaved evax (*Hesperevax sparsiflora var. brevifolia*), Mendocino cypress (*Hesperocyparis pygmaea*), Point Reyes horkelia (*Horkelia marinensis*), thin-lobed horkelia (*H. tenuiloba*),

harlequin lotus (*Hosackia gracilis*), hair leaved rush (*Juncus supiniformis*), perennial goldfields (*Lasthenia californica ssp. macrantha*), coast lily (*Lilium maritimum*), leafy stemmed mitrewort (*Mitellastra caulescens*), Bolander pine (*Pinus contorta ssp. bolanderi*), white beaked rush (*Rhynchospora alba*), great burnet (*Sanguisorba officinalis*), Point Reyes checkerbloom (*Sidalcea calycosa ssp. rhizomata*), Maple-leaved checkerbloom (*S. malachroides*), purple stemmed checkerbloom (*S. malviflora ssp. purpurea*), and western dog violet (*Viola adunca*).

During the conducted field surveys, every plant species encountered was classified to the most detailed taxonomic level required to identify the presence of plants of special interest. The taxonomic classification was based on "The Jepson Manual: Vascular Plants of California" (Baldwin 2012). Furthermore, "A Manual of California Vegetation Second Edition" (Sawyer 2009), "Classification of the Vegetation Alliances and Associations of Sonoma County, CA, Volume 2" (Klein 2015), and the "California Natural Community List" (CDFW 2021) were utilized to categorize and detail the typical plant communities observed. There is a risk of not detecting some species, such as when a rare plant is consumed by wildlife like deer at a time it would have been visible and identifiable, leading to potential false negatives in the survey findings. Additionally, not all plants emerge from dormancy annually, making their detection inconsistent. Yearly variations in weather can unpredictably affect when plants bloom; heavy rainfall, for instance, might cause certain species to flower earlier or later than usual. Regular visits to the site and ongoing monitoring at established reference locations are strategies employed to minimize these errors.

# 5. RESULTS

Field work was performed to confirm/disconfirm the following: wetlands, plants, plant communities, special-status animals, and animal habitat in the study area.

5.1. Floristic Botanical Presence/Absence Survey

The CDFW's California Native Diversity Database (CNDDB) Rarefind, was used to inform the search on flora previously reported in the vicinity of the project area.

5.1.1. Special-Status Plant Species

Forty-seven species of plant species were identified in the Albion, Elk, Mendocino, Mathison Peak and Mallo Pass Creek quads of the study area and are listed in Appendix E.. No special-status plant speciess were observed during the protocol level biological surveys.

## 5.1.2. Special-Status Plant Communities

Six terrestrial communities were identified in the Albion, Elk, Mendocino, Mallo Pass Creek and Mathison Peak quads quads of the study area and are listed in Appendix E. **No special-status plant communities were observed during the protocol level biological surveys.** 

### 5.2. Wetland Delineation

A routine-level study of hydrology, soils, and vegetation indicators was conducted within the study area. The results for each sampling points were recorded on the data sheet (Appendix D) from the 2010 Regional Supplement to the Army Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0). The locations of the sampling points are depicted in Appendix Figure A-1. The wetland hydrology, hydric soils, and hydrophytic vegetation indicators used to make wetland determinations. Protocol-level samplings were only conducted in those areas that both showed a potential for being wetland, and which occurred in locations with the potential to affect the existing and proposed development. The sampling points were marked in the field with 24-inch wooden stake with colored flagging and labeled with a Sharpie marker. As a result of this field work, Figure 11 was created, which depicts the wetland delineation map. The presumed wetland on the subject parcel was calculated to be 1.1 acres in size.

The method of selecting sampling points aligns with the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual. Several of the sampling points are representative of the boundaries of the wetlands, in addition to sampling points at the proposed and existing developments, providing a comprehensive forensic study of presumed wetlands.

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5.2.1. Sampling Point SP01 – Proposed Limited-Density Rural Dwelling and Surrounding

Sampling Point SP01 was chosen due to the proposed limited-density rural dwelling. Sampling point SP01 is representative of the dashed circular area in Figure 1 drawn around the grey box titled "Proposed Main House 2000 sqf" in Figure 1. Sampling SP01 is also representative of the area of the aerobic septic system, marked as "Septic Lids/Valve Box" and "PVC Line" in Figure 1. **No wetlands, rare plants, or rare plant communities were observed at or within 100 feet of SP01.** 

5.2.2. Sampling Point SP02 – Proposed Garage/Accessory Dwelling Unit and Surrounding

Sampling Point SP02 was chosen due to the proposed garage/accessory dwelling unit. Sampling point SP02 is representative of the grey box titled "Proposed Garage-Studio 744sqf" in Figure 1 and the circular CalFire turnaround to the north/northwest of it. **No** wetlands, rare plants, or rare plant communities were observed at or within 100 feet of SP02.

5.2.3. Sampling Points SP03, SP06 – Storage Shed and Surrounding

Sampling Points SP03 and SP06 were chosen due to the proposed storage shed. These sampling points are representative of the grey box titled "Storage Shed" in Figure 1. No wetlands, rare plants, or rare plant communities were observed at or within 100 feet of SP03 and SP06.

5.2.4. Sampling Points SP04, SP05 – Presumed ESHA at Existing Driveway Crossings

Sampling Points SP04 and SP05 were chosen due to the presence of water in March 2024 in an area where the existing driveway crosses the presumed wetland depicted in the 1998 "Wetland Delineation" (see Figure 6, Panel B) and/or in areas where the existing driveway is within 50 feet of presumed ESHA. Within the Coastal Zone of California, water present can meet "one parameter" definition of Coastal Act wetland, and Sampling Points SP04-05 were determined to represent a Seasonal Wetland ESHA. No rare plants or rare plant communities were observed at or within 100 feet of SP04-05. Sampling Points SP04-05 confirm the existence of a wetland as identified in the 1998 report titled "Delineation of Potential Jurisdictional Wetlands and Waters of the United States" by Wetlands Research Associates, Inc. Two large swales were confirmed, which run from the southeast corner of the study area to the north west corner. The swales include a vegetated drainage that ranges between 2 to 4 feet in width. The principle hydrological sources for the study area are precipitation, groundwater, surface run-off, and seasonal water flow from on-and-off site sources. The water present in this area is largely due to a culvert under the Shoreline Highway that directs precipitation/surface water from a neighboring parcel onto the subject parcel during heavy rainfall, instead of

the naturally-occurring drainage depicted in the U.S. Fish & Wildlife Service's National Wetlands Inventory (see Figure 7). However, the occurrence of water is of seasonal nature. Of note, during site visits between February and May 2024, the subject area suffered from several rain storms with unusually high amounts of precipitation (atmospheric rivers, as per NOAA). Nonetheless, the existing driveway crossings including culverts were appropriately-size, effectively handling waterflow even during intense rainfall, and the existing culverts and driveway have been professionally installed to direct waterflow to the established wetland areas. An altered hydrology due to culverts/driveway has not occurred.

5.2.5. Sampling Point SP07 – Presumed ESHA in Alternate Access Driveway

Sampling Point SP07 was chosen due to the presence of water in an area titled "Grass Path" in Figure 1. Within the Coastal Zone of California, water present can meet "one parameter" definition of Coastal Act wetland, and **Sampling Point SP07 was determined to represent a Wetland ESHA** with water flowing from the neighboring property to the South onto the subject parcel (see Figure 12). **No rare plants or rare plant communities were observed at or within 100 feet of SP07.** 

Figure 12: Alternate Access Driveway (titled Grass Path in Figure 1) Within Presumed Wetland ESHA



5.2.6. Sampling Point SP08 – Third culvert

Sampling Point SP08 was chosen due to the presence of another culvert. **No wetlands**, rare plants, or rare plant communities were observed at or within 100 feet of SP08.

## 5.3. Special-Status Wildlife Species – Potential Occurrences

The CDFW's California Native Diversity Database (CNDDB) BIOS 6, was used to inform the search on fauna previously reported in the vicinity of the project area. Twenty species of animal species were identified in the Albion, Elk, Mendocino, Mathison Peak and Mallo Pass Creek quads of the study area and are listed in Appendix E. Protocol-level surveys were conducted for amphibians during a June 1, 2024 site visit. **No special-status animals were observed during the protocol level biological surveys.** 

## 6. REDUCED BUFFER ANALYSIS SUMMARY

A Reduced Buffer Analysis, as outlined in Appendix F, was carried out to guide the establishment of appropriate safeguards for both sensitive species, as well as habitats deemed sensitive within the area of study. This analysis facilitated the formulation of essential mitigation strategies (detailed in Section 7) aimed at minimizing the environmental footprint of both existing and planned developments, ensuring their impacts on sensitive ecosystems are negligible.

The proposed development project is strategically positioned beyond the 100-foot ESHA buffers, adhering to regulatory guidelines. Both the Limited-Density Rural Dwelling and the Garage/Accessory Dwelling Unit are within the building envelope of the Vested CDP# 1-81-85. The proposed storage shed is positioned beyond the 100-foot ESHA buffers.

Similarly, the design and placement of the existing aerobic septic system, along with its primary and replacement fields, observes a cautious distance from the 100-foot ESHA buffers, mitigating potential adverse impacts on presumed sensitive habitats.

The existing three culverts, along with the driveway that traverses these structures, may encroach upon what is believed to be the 50ft buffer of a seasonal wetland ESHA. Note that the culvert at SP08 was not determined to be a wetland. Nonetheless, a delineation based on a 100-foot diameter around these culverts identifies three potentially impacted zones, each covering an area of 0.18 acres, cumulatively amounting to 0.54 acres. A delineation based on a 20-foot diameter (i.e., greater than the width of the existing 12-foot-wide driveway) around these culverts identifies three potentially impacted zones, each covering an area of 0.014 acres, cumulatively amounting to 0.042 acres. Appendix Figure A-1 depicts the impact area of the existing driveway on the presumed wetlands at a conservative 20-foot diameter delination.

This area may represent the impact on the presumed seasonal wetland ESHA. One of these two areas includes the existing well, subpanel, piping, and water storage tank. Of note, development within 50-foot EHSA buffers occasionally necessitates a Report of Compliance to ensure that such development is situated in areas with minimal environmental impact. Nevertheless, biologists from Dark Gulch LLC have assessed that a Report of Compliance is not required in this case. This conclusion is based on (1) the low-impact nature of the existing development, (2) diligent permitting on behalf of the previous and current landowners (as discussed in Sections 3.2. and 3.7.), and (3) the absence of viable alternative locations. The positioning of the driveway, crucial for connecting the Shoreline Highway with the proposed residence, does not allow for relocation elsewhere on the property without compromising ecological integrity.

# 7. MITIGATION AND AVOIDANCE MEASURES

The proximity of both existing and proposed development to natural habitats has been thoroughly examined to assess their potential to disrupt sensitive species. This assessment was based on the methodologies and findings detailed in this report, along with the Reduced Buffer Analysis stipulated by the County of Mendocino Local Coastal Program (Appendix F). From these analyses, it is our belief that the potential effects on presumed ESHA, specifically the presumed wetland, can be significantly reduced or entirely circumvented by adopting the mitigation strategies outlined below.

To mitigate the impact of both the current and future developments on the identified seasonal wetlands ESHA, we propose the following measures. These strategies are designed to safeguard potential environmental resources located within a 100-foot radius of the development sites, ensuring their preservation and preventing detrimental effects.

# 7.1. Potential Impact to Birds

Removal of vegetation and construction activity near trees and vegetated areas has the potential to disturb birds' nesting process if it occurs during the nesting season.

7.1.1. **Avoidance Measure: Nest Protection**: Should active native bird nests be found, activities like vegetation removal or construction that could disturb nesting are prohibited within a 100-foot buffer zone, adjustable based on species, habitat, and disturbance levels. This buffer zone must be maintained until the fledglings are independent. A biologist should monitor the nest site weekly during the breeding season to confirm the buffer's effectiveness in preventing disturbances.

7.1.2. Avoidance Measure: Construction Limited to Daylight: To reduce noise disturbance and the need for artificial lighting, construction activities should be confined to daylight hours.

### 7.2. Potential Impact to Amphibians and Insects

To mitigate potential disturbances to amphibians and insects during construction, such as traversing their habitats and disturbing hiding spots under materials, the following protective measures are recommended:

7.2.1. **Avoidance Measure: Contractor Training**: Before starting construction, contractors should undergo training led by a qualified biologist on recognizing amphibians and insects native to the Mendocino coast, within two weeks of beginning work. This training should cover distinguishing between species of special concern and more common species, along with the necessary steps and communication protocols if species of special concern are encountered.

7.2.2. **Pre-construction Surveys**: At the start of each day, before initiating grounddisturbing work, crews should conduct visual inspections of the area to identify any species of special concern or common animals present.

7.2.3. **Mindful Debris Management**: When removing construction debris and handling wood stockpiles, materials should be moved carefully by hand to prevent harming amphibians.

7.2.4. **Rain Event Protocol**: Construction should pause for 48 hours following a rain event to protect the habitat during wet conditions. After this period, a trained crew member will inspect the area for any species of special concern before resuming work.

#### 7.3. Potential Impact to Wetland Areas

Rain, construction, and vegetation removal near presumed ESHAs may harm wetland habitats. Ground compaction and disturbance from materials and vehicles are concerns during construction stages. Furthermore, introducing invasive species during construction and landscaping could negatively affect native plants and habitats.

#### 7.3.1. Restoration Mitgation Measure: Replant Potentially Lost Wetland Vegetation:

Consider mitigating the possible impact of the existing driveway crossings by planting wetland vegetation in the amount to replace the protective values of the impact area of the driveway on the parcel, at a minimum ratio of one (1) to one (1), as per Mendocino County Code Sec. 20.719.020 - ESHA—Development Criteria. An appropriate native wetland vegetation would be Pacific reedgrass (*Calamagrostis nutkaensis*), which will be planted in an area of the property that is not currently a wetland. Proposed locations of the new wetland is around SP06 and SP08, areas which currently are not wetlands. Using the results from the forensic wetland and waters delineation, the impact area was determined to be 0.042 acres. Inputting the determined impact area into the U.S. Army

Corp of Engineers Mitigation Calculator (12501-SPD.06), the Required Mitigation was calculated to be 0.09 acres and 79 linear feet at a final ratio of 2.2. However, since the impact is so small (e.g., less than one (1) acre) and isolated it may not be ecological reasonable to attempt to recover and maintain a high level of biological productivity without major restoration activities, which may in turn have negative ecological impacts, as per Mendocino County Code Sec. 20.719.025 - Wetlands and Estuaries.

7.3.2. Avoidance Measure: Staging Area Plan: Position all materials and vehicles in upland areas, maintaining a distance of over 100 feet from all ESHAs.

7.3.3. **Avoidance Measure: Best Management Practices**: Apply standard best management practices to reduce erosion from construction. Limit ground disturbance and stabilize disturbed areas promptly using native seeds or biodegradable materials.

7.3.4. **Avoidance Measure: Clean Machinery**: To prevent the spread of invasive species, thoroughly clean heavy machinery, such as excavators and skid steers, offsite before use.

7.3.5. **Avoidance Measure: Non-Invasive Planting**: Avoid planting invasive species. Opt for non-invasive, native vegetation to preserve the local ecosystem. Some invasive plants commonly found on the Mendocino coast that should be avoided are: lceplant (*Carpobrotus edulis, C. chiloensis, & Delosperma sp.*), cotoneaster (*Cotoneaster franchetii & C. pannosus*), English holly (*Ilex aquifolium*), English ivy (*Hedera helix*), cape ivy (*Delairea odorata*), pampas grass (*Cortaderia jubata & C. selloana*), cape weed (*Arctotheca calendula & A. prostrata*), montbretia (*Crocosmia sp.*), redhot poker (*Kniphofia uvaria*), periwinkle (*Vinca major*), bulbil bugle lily (*Watsonia meriana*), and callalily (*Zantedeschia aethiopica*). Instead, plantingof locally-sourced native species appropriate to the habitat will be preferred. This will help support native pollinators, insuring that they have amble food and habitat.

7.3.6. **Current Mitigation Measures: Removal & Replacement of Non-Native Species:** Currently, the owner is actively removing non-native *Pinus radiata* and replacing it with *Pinus muricata*. The creation of open space will also allow natural recruitment of native species. Active removal of targeted invasive species in ongoing, with particular emphasis on CAL-IPC (California Invasive Plant Council) listed species including: *Bromus spp., Cirsium vulgare, Cirsium arvenses, and Digitalis purpurea.* 

7.4. Restoration Mitigation and Monitoring Plan (RMMP)

This restoration mitigation and monitoring plan (RMMP) is designed to comprehensively address how the aforementioned potential restoration mitigation measure (see 7.3.1.) will be monitored, ensuring ecological functionality and compliance with regulatory standards. The plan's flexibility allows for adaptive management strategies to effectively respond to monitoring

outcomes and evolving site conditions. This RMPP is based on the regulations set in Mendocino County Code Sec. 20.532.065 – Wetland Restoration Plan Procedures. This RMPP also addresses point 3 of the Recommendations made by the North Coast Regional Water Quality Control Board in its letter from April 26, 2024 and is intended to ensure compliance with the California Water Code and the Clean Water Act, as referenced in the letter. In addition, it addresses the CEQA Guidelines Section 15126.4(a)(1)(B), as referenced by the Mendocino Planning and Building Services Department.

7.4.1. **Regular Monitoring**: Before any restoration mitigation begins, the property owner will use the results from the sampling point analyses (see Appendix D) as baseline data on existing species and environmental conditions. This will serve as a reference point for future comparisons. Then, a regular monitoring schedule is set up, biannually, to observe and record the conditions of the wetland and surrounding areas. The property owner will utilize a combination of visual inspections, photographic records, and biological surveys to detect any invasive species or ecological changes. A response plan to manage invasive species will be implemented promptly as they are detected, including physical removal and potential chemical treatment methods approved for sensitive environments. The sizing of the existing culverts is checked annually to omit any risk of plugging and potential crossing failure, and fine sediment discharge.

7.4.2. **Performance and Success Criteria**: After 2 years of monitoring, cover of Pacific reedgrass (*Calamagrostis nutkaensis*) should be >60% and increase by 2-5% yearly until the goal of 80% within the restoration area is reached by the end of the monitoring period (i.e., 5 years). In addition, the area covered by other non-invasive species will be reduced to <10%. These specific values meet the CEQA Guidelines Section 15126.4(a)(1)(B), which recommends to adopt specific performance standards the mitigation will achieve.

The property owner and/or a consulting biologist will conduct an annual review between February and May each year to record these metrics and will make necessary adjustments to planting strategies and/or management practices based on annual performance to ensure ongoing success.

7.4.3. **5-Year Success Criteria**: After 5 years of monitoring, cover of Pacific reedgrass (*Calamagrostis nutkaensis*) should be >80% and cover of non-invasive species should be reduced to <10%. These specific values meet the CEQA Guidelines Section 15126.4(a)(1)(B), which recommends to adopt specific performance standards the mitigation will achieve.

7.4.4. **Adaptive Management and Long-Term Protection**: Data will be collected from regular monitoring to identify trends or issues that may require intervention. The property owner is prepared to adjust restoration techniques, plant species selection, or

management practices based on observed data and external factors like climatic changes. The property owner has also started to implement physical barriers (hedge) to protect sensitive areas from human disturbances.

7.4.5. **Agency Coordination**: The North Coast Regional Water Quality Control Board and the County of Mendocino Department of Planning and Building Services will be kept informed of project progress through updates and consultation meetings. The property owner ensures all construction and restoration activities comply with relevant permits and regulations. At the end of five years, a comprehensive review of the project's success against these criteria will be conducted and reported the outcomes to these stakeholders

7.4.6. **Documentation and Reporting**: The property owner maintains detailed records of all restoration mitigation, planting, monitoring, and management activities, and is prepared to submit regular reports to the appropriate agencies, detailing progress, compliance with permits, and any challenges faced.

# 8. DISCUSSION

In conclusion, it is the professional opinion of the qualified biologist at Dark Gulch LLC that the development, as existing and proposed, has not and will not significantly degrade presumed ESHA resources. Second, there is also no feasible less environmentally damaging alternative to existing and proposed developments. The usage of the alternate access driveway identified in SP07 does not represent a less environmentally damaging alternative. Third, all feasible mitigation and avoidance measures capable of reducing or eliminating development-related impacts have been adopted by the property owner.

One category of presumed ESHA was identified within the study area, verifying the extant wetlands delineation by Wetlands Research Associates, Inc. and Redwood Coast Associates, as well as the botanical findings of Gordon E. McBride, Ph.D., Botanical Surveys (see Figures 3, 6, and 11, as well as Appendices B and C):

**Seasonal Wetland ESHA** – Two large swales were identified, which run from the southeast corner of the study area to the north west corner. The swales include a vegetated drainage that ranges between 2 to 4 feet in width. The principle hydrological sources for the study area are precipitation, groundwater, surface run-off, and seasonal water flow from on-and-off site sources.

The proposed development is thoughtfully placed outside the 100-foot ESHA buffers, in compliance with environmental regulations. The Rural Dwelling and Garage/Accessory Dwelling Unit fall within the Vested CDP# 1-81-85 boundary, and the planned storage shed also respects the 100-foot ESHA buffers.

The property owner has implemented several protective measures to mitigate potential environmental impacts during construction. To protect bird nesting, a 100-foot buffer zone will be maintained around active nests, with biologists monitoring the effectiveness of this zone. Construction activities will be restricted to daylight hours to minimize noise and light disturbances. Additionally, contractors will receive training on recognizing native amphibians and insects, with daily pre-construction surveys to identify and protect these species. Measures also include careful debris management, a 48-hour construction halt after rain, and considering proactively planting wetland vegetation. The staging of materials and machinery cleaning protocols will be in place to prevent invasive species spread, emphasizing the planting of noninvasive, native vegetation to preserve local ecosystems.

The existing and proposed development does not cause significant harm to the identified environmental resource. There are no practical alternatives with less environmental impact available for the property owner to reach the CDP-vested building envelope of the proposed residence. All achievable measures to minimize or eliminate the environmental impacts of the project have been put into action.

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# APPENDIX A: 2023 BIOLOGICAL SCOPING SURVEY



#### **Dark Gulch Environmental Consulting**

Biological Scoping Survey – 2700 North Highway One, Albion CA 95410

May 4, 2023

#### Introduction:

A biological scoping survey was conducted on 11 February 2023 by Principal Consulting Biologist Sarah Bradley in which the existing vegetation present was noted. The Study Area, as shown in Figures 1, is a highly disturbed habitat that is described as landscaped and developed. While there is a potential for 69 species of special concern to occur on or near the Study Area, no species of special concern were observed during the scoping session. Previously *Viola adunca* (a special plant due to its host status for the Behren's Silverspot Butterfly) and Point Reyes checkerbloom were identified during a 2005 botanical survey and wetland delineation. An updated wetland delineation and biological survey were conducted in 2007. At that time a wetland of approximately two acres was identified, along with two small wetlands previously identified in the earlier survey. The Study Area has been previously described as "west sloping marine terrace bound to the east by Highway One and to the west by near-vertical oceans bluffs. Much of the site is characterized by introduced perennial grassland vegetation. Coastal scrub habitat occurs near the edge of the bluff and is sparse acres the steep vertical face.

The Manual of California Vegetation (CNPS 2023) the California Natural Community List (CDFW 2023) and the California Natural Diversity Database (CNDDB) (CDFW 2023) were used to identify potential species that might occur within the Study Area. The CNDDB recognizes all communities and plants ranked at a State level of S3 or lower as sensitive.

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Figure 1: Photos of driveway in Project Site, looking to the east.

#### Procedure:

Prior to a site visit, all pertinent databases were queried to gather information regarding the Study Area. This includes the above-referenced sites as well as the US Fish and Wildlife Wetlands Mapper and UC Davis's Soils Web. All information was compiled and reviewed prior to the site visit to give the biologist the best understanding of the potential occurrences and factors that could affect the development of this project. A site visit was made, and the Study Area was thoroughly reviewed, and photographs were taken as references. Finally, all. queries from CNDDB were analyzed and the potential for occurrence was determined based on the condition of the Study Area. A final determination was made after all data was reviewed and comparison of the site photographs were made.

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#### **Proposed Project:**

This report is being prepared as part of the application process for permitting to build a single-family home, a garage and studio, an entry gate, and a storage shed. The entire project site is approximately 2.1 acres in size. Currently, there is a well, septic system, driveway network and planted/revegetated areas within the proposed project site. The proposed house site is located to the east of the property and is outside of the 100 foot buffer for the wetlands. of the project site. The lot is a bordered to the west by the Pacific Ocean. Highway One forms the eastern border of the property. The northern border is Whitesboro Cove. The area to the south of the project site is a single family home site one acre in size.

#### Habitat Integrity:

Habitat integrity is defined as the ability of an ecological system to support and maintain a community of organisms that has species composition, diversity and functional organization comparable to those of natural habitats within a region. The Study Area has good habitat integrity. The wetlands are being protected and appear undisturbed. Large areas of the project site are described as introduced perennial grassland. These same habitats are described in studies performed in 2005 and 2007. These consistent findings indicate that the project site is stable and large-scale changes/disturbance are not occurring. The driveway is an existing gravel driveway and is adequately constructed to protect ESHA resources from degradation.



Figure 2: Photo of vegetation, located on south side of the Study Area.

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Figure 3: Large wetland located in the center of the Project Site.

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#### APN: 123-290-03 BIOLOGICAL SCOPING, WETLAND DELINEATIONS, & BOTANICAL SURVEYS



Figure 4: View of proposed building site

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Figure 5: Proposed building site looking to the west.

#### Results

The Study Area is a well-studied site, and this current study confirms previous findings. The Study Area is comprised of (1) wetlands, (2) introduced perennial grasslands, (3) Monterey pine forest and (4) coastal bluff scrub. The Monterey pines forests and coastal bluff scrub are both very small in size. In comparing the previous studies with the current conditions, it was found that the conditions are as previously reported. The existing botanical study and wetland delineation appear to be accurate to current conditions and no further studies are proposed.

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# APPENDIX B: 1998 WETLAND DELINEATION AND BOTANICAL SURVEY

Download here:

tinyurl.com/2300NHwy1AppendixB

# APPENDIX C: 2007 WETLAND DELINEATION

Download here:

tinyurl.com/2300NHwy1AppendixC

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# APPENDIX D: SAMPLING POINTS

APN: 123-290-03 BIOLOGICAL SCOPING, WETLAND DELINEATIONS, & BOTANICAL SURVEYS





#### WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

siect/Site: 2700 N Highway 1, 123-290-03	City/County: Albion	/Mendocino	Sampling Date: 05/30/2024
olicant/Owner: M. Reimann		State: CA	Sampling Point: ()
estigator(s); S.Bradley, B. Huff	Section, Township, F	Range: 28, 16N, 17W M	ount Diablo
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bregion (LRR): A4	39.21495	Long: 123.768444	Datum
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US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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IVDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Secliment Deposits (B2) Dift 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: Surface Water Present? Yes	ed: check ell that acoly) — Water-Stained Leaves (89) (except MLRA 1, 2, 4A, and 4B) — Salt Crust (B11) — Aquatic Invertebrates (B13) — Hydrogen Sulfide Odor (C1) — Oxidized Rhizospheres along Living Root — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Solts (C6) — Stunted or Stressed Plants (D1) (LRR A) 87) — Other (Explain in Remarks) (B8) No    Depth (Inches):	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 (C3 s (C3) Geomorphic Position (D2)     Shaltow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7)
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		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 (C3     Seconorphic Position (D2)     Shatlow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7)
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IVDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one repule         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 (f         Sparsely Vegetated Concave Surface         Field Observations:         Surface Present?       Yes         Inductor	ed. check all that acoly)	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 (C3)     Geomorphic Position (02)     Shattow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D5) (LRR A)     Frost-Heave Hummocks (D7)  nd Hydrology Present? Yes No

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#### WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: 2700 N H	lighway 1, 123-290-03	City/County	Albion/Mendocino	Sampling Date: 05/30/2024
Applicant/Owner: M. R.	eimann		State: CA	Sampling Point 02
Investigator(s): S.Brad	ley, B. Hutt	Section, To	winship, Range: 28, 16N, 17W	Mount Diablo
Landform (hillslope, terr	ace, etc.):	Local relie	(concave, convex, none):	Slope (%):
Subregion (LRR): A4		Let 39.21495	Long: 123.768444	Datum
Soil Map Unit Name: FI	umevile		NWI class	sification:
Are climatic / hydrologic	conditions on the site typical	I for this time of year? Yes	X_ No (If no, explain )	n Remarks.)
Are Vegetation	Soil, or Hydrology _	significantly disturbed?	Are "Normal Circumstance	s" present? Yes X No
Are Vegetation	Soil, or Hydrology	naturally problematic?	(If needed, explain any ans	wers in Remarks.)

#### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

The second	No	Ves	Is the Sampled Area	No_X	Yes	Hydric Soll Present?
Wetland Hydrology Present? Yes No	 _ 110	169	within a webana?	No	Yes	Wetland Hydrology Present?

#### VEGETATION - Use scientific names of plants.

			NCHICK'S	Number of Dominant Species
2				Total Number of Dominant
3				Species Across All Strata: (B)
		+ Total Cover	-	Percent of Dominant Species That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum (Piot size:)				Prevalence Index worksheet:
				Total % Cover of Multiply by
2				OBL species x1 =
3				FACW species x 2 =
4				FAC species
5				FACIL season 5 star 20
		= Total Cover	-	
Herb Stratum (Plot size:)		-	-	OPC species X9=
1. POZA MALOT		<u>h</u>	AC.	Column Totals: (A) (B)
2/1571CKED JAQUILIAUH	- 5-		ALL	Prevalence Index = B/A = 3,2.9
3. Holdus identus	5	F	N	Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vacetation
5				2. Deminance Test in SOM
			_	2 - Dominance fest is you're
3			_	3 - Prevalence Index is \$3.0
8				<ul> <li>4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
9				5 - Wetland Non-Vascular Plants
10			-	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1	_		-	<sup>1</sup> Indicators of hydric soil and welland hydrology must
	IE			be present, unless disturbed or problematic.
Woody Vice Stratum (Pirtaine)	-12	= Total Cover		
A A A A A A A A A A A A A A A A A A A				NOTION OF A
1				Hydrophytic
2				Present7 Yes No
% Bare Ground in Herb Stratum		= Total Cover		
Remarks:				

rofile Description: (Describe to the de	pth needed to document the indicator or confir	m the absence of Indicators.)			
Depth Matrix	Redox Features				
(inches) Color (moist) %	Color (moist) % Type' Loc*	Texture Remarks			
D-18 10YR 2/1		Clautoan			
the stand of the second	the second se	J			
	And the second sec				
- O-O-Participa O-Decision Ri	A-Reduced Matrix CS=Covered or Coated Sand	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Type: C=Concentration, O=Depletion, Ha	II I RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>1</sup> :			
Ayone Son meleators. (Application to a	Sandy Radox (\$5)	2 cm Muck (A10)			
_ Mistosol (A1)	Stringer Matrix (SB)	Red Parent Material (TF2)			
Histoc Epipedon (A2)	i carry Mucky Mineral (F1) (except MLRA	<ol> <li>Very Shallow Dark Surface (TF12).</li> </ol>			
Back Hate (A3)	Loamy Gleved Matrix (F2)	Other (Explain in Remarks)			
Hydrogen Sande (vv)	Depleted Matrix (F3)				
Thick Dark Surface (A12)	Redox Dark Surface (F6)	<sup>b</sup> Indicators of hydrophytic vegetation and			
Sandy Marky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present.			
Santy Glaved Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.			
Restrictive Laver (if present):					
Tupe		N.L.			
Type.		Hydric Soll Present? Yes No X			
Cohen Durantests					
Remarks					
Remarks: IYDROLOGY					
Remarks: IYDROLOGY Wetland Hydrology Indicators:		Secondary Indicators (2 or more recuired)			
Remarks: IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requi	red, check all that apply)	Secondary Indicators (2 or more recuired)			
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# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

2700 N Highway 1, 123-290-03	City/County_ Albion/M	lendocino	Sampling Date: 05/30/2024
Applicant/Duper M. Reimann	- Aliceandi	State: CA	Sampling Point 03
Investigator(s): S.Bradley, B. Huff	Section, Township, Ra	nge: 28, 16N, 17W M	ount Diablo
Landform (hillslope, terrace, etc.):	Local relief (concave,	convex, none):	Slope (%):
Subregion (LRR): <u>A4</u> Soil Map Unit Name: Flumeville	Lat	NWI class?	fication:
Are climatic / hydrologic conditions on the site typics	al for this time of year? Yes <u>X</u> No _	(If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are	Normal Circumstances	present? Yes <u>A</u> No
Are Vegetation Soil, or Hydrology _	naturally problematic? (If ne	reded, explain any answ	vers in Remarks.)

# SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soll Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	_ No <u>X</u>
Remarks					

### VEGETATION - Use scientific names of plants.

	Absolute	Dominant Indicat	or Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species? Status	Number of Dominant Species     That Are OBL, FACW, or FAC:(A)
			Total Number of Dominant() (B)
L		= Total Cover	Percent of Dominant Species 12.5 (A/B)
Sepling/Shrub Stratum (Piot size:)			Prevalence Index worksheet:
			Total % Cover of Multiply by:
2			OBL species x 1 =
3			FACW species 5_ x2=_10
4	_		FAC species x3=
5			FACU species x4 =
		= Total Cover	IIPI snecles x 5 =
Herb Stratum (Plot size:)	5	FA	(A) (B)
2			Prevalence Index = B/A =
3.			Hydrophytic Vegetation Indicators:
4			1 - Rapid Test for Hydrophytic Vegetation
5			2 - Dominance Test is >50%
8			X 3- Prevalence Index is <3.0
1			<ul> <li>4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
8			5 - Wetland Non-Vascular Plants <sup>1</sup>
9			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
10			Indicators of hydric soil and wetland hydrology must
11.	115		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: )	-13	_= Total Cover	
1			Hydrophytic
2			Vegetation
	_	= Total Cover	Present? Yes No
% Bare Ground in Herb Stratum			

50

rofile Description: (Describe to the o	topth needed to document the indicator of column	and account of historically
Depth Matrix	Redox Features	Texture Remarks
inches) Color (mpist) %	Color (moist)	Claulog .
1-13 10 V/R 211_		
/ /		
		And the second sec
14		
Type: C=Concentration D=Depletion.	RM-Reduced Matrix, CS-Covered or Coated Sand Gr	ains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix
lydric Soll Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils":
Histopol (A1)	Sandy Redox (\$5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S8)	Red Parent Material (TF2)
Black Histic (A3)	Loanny Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Glayed Matrix (F2)	Other (Explain in Remarks)
Depleted Balow Dark Surface (A11)	Depleted Matrix (F3)	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	<ul> <li>Depleted Dark Surface (F7)</li> </ul>	wetland hydrology must be present.
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic
Restrictive Layer (if present):		
Туре:		V
Depth (inches)		Hydric Soil Presant? Yes No
YDROLOGY		
YDROLOGY Wetland Hydrology Indicators:		Providence by Southans (2 or more name (read)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one red	ured, check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one red Surface Water (A1)	uired; check all that acoly) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2)	uired, check all that acply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B)
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YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1) High Water Table (A2) Seturation (A3) Water Marks (B1) Setimant Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ured, check all that acoly) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Suifice Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2,     4A, and 4B)     Drainege Patterns (B10)     Dry-Season Water Table (C2)     Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)     Shallow Aquitard (D3)
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YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg		Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2,     4A, and 4B)     Orainege 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)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg		Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2,     4A, and 4B)     Drainege Patterns (B10)     Dry-Season Water Table (C2)     Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)     Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) () Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7) tand Hydrology Present? Yes No
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg		Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2,     4A, and 4B)     Orainage Patterns (B10)     Dry-Season Water Table (C2)     Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)     Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) () Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7)  tand Hydrology Present? Yes No
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg 		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) ots (C3) Geomorphic Position (D2)     Shallow Aquitard (D3) 6) FAC-Neutral Test (D5) () Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7)  tand Hydrology Present? Yes No
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YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one reg Surface Water (A1)	ured, check all that acoly)	Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2,     4A, and 4B)     Drainege 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)  tand Hydrology Present? Yes No (if available:
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 (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soll Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Present? Yes Saturation Pres	ured, check all that acoly)	Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)     Drainege 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)  tand Hydrology Present? Yes No

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## WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: 2700 N Highw	ay 1, 123-290-03	City/County:	Albion/Mend	tocino	Sampling Date:	05/30/2024
Applicant/Owner: M. Reima	กก			State: CA	Sampling Point	104
Investigator(s). S.Bradley,	B. Huff	Section, Taw	nship, Range.	28, 16N, 17W M	Aount Diablo	
Landform (hillslope, terrace,	etc:):	Local relief (	concave, conv	vex, none):	Si	ope (%):
Subregion (LRR): A4		Lat 39.21495	Lo	ng. 123.768444	Dat	um:
Soil Map Unit Name: Flume	ville			NVI class	fication:	
Are climatic / hydrologic cond	itions on the site typical	for this time of year? Yes	No	_ (If no, explain in	Remarks.)	
Are Vegetation, Sol	, or Hydrology	significantly disturbed?	Are "Norr	mal Circumstances	present? Yes	X No
Are Vegetation, Sol	or Hydrology	naturally problematic?	(If needed	d, explain any ansv	vers in Remarks.)	

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes X	No No No	Is the Sampled Area within a Wetland?	Yes	Х	No	
Remarks:							

### VEGETATION – Use scientific names of plants.

	= Total C		Number of Dominant Species
	= Total C	over EAX	Total Number of Dominant Species Across All Strata:       (B)         Percent of Dominant Species That Are OBL FACW, or FAC: $5\%$ Prevalence Index worksheet:       (A/B)         Prevalence Index worksheet:       Multiply by:         OBL species       5         FACW species       2.5         FACW species       2.5         FACW species       4.5         Y3       12.5         FACU species       3.5         Column Totals:       7.5         Prevalence Index = B/A =       2.53         Hydrophytic Vegetation Indicators:       1.4         Normance Test is >50%       3.9         Yanget Test Index is \$3.0       1.0
	= Total C	over EAX	Species Across All Strata:       (B)         Percent of Dominant Species       5%)         That Are OBL_FACW, or FAC:       5%)         Prevalence Index worksheet:
	= Total C	over EAX	Percent of Dominant Species $5\%$ (A/B)         Prevalence Index worksheet:
a la la	_ = Total C	over EAX	That Are OBL_FACW, or FAC: $SY / (A/B)$ Prevalence Index worksheet:
	_ = Total C	EAX DEAX	Prevalence Index worksheet:         Total % Cover of:       Multiply by.         OBL species $5$ x1 = 5         FACW species $25$ x2 = 50         FAC species $45$ x3 = 125         FACU species $x5 =$ $100$ UPL species $x5 =$ $100$ Column Totals: $35$ $(A)$ $100$ Prevalence Index = B/A = $2.53$ Hydrophytic Vegetation Indicators: $1 - Rapid Test for Hydrophytic Vegetation         X       2 - Dominance Test is >50%       X = 3.0^{1} 3.0^{1} $
d.1d.1d	= Total C	EAX DAL	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
	_ = Total C	EAX EAX EAX	OBL species $5$ $x1 = 5$ FACW species $ZS$ $x2 = 50$ FAC species $45$ $x3 = 125$ FACU species $x4 =$ UPL species         UPL species $x5 =$ $(a)$ Column Totals: $ZS$ $(A)$ Prevalence Index = B/A = $ZSS$ Hydrophytic Vegetation Indicators: $1 - Rapid Test for Hydrophytic Vegetation$ X       2 - Dominance Test is >50%         X       3 - Prevalence Index is $x3.0^{1}$
d.10.14	_ = Total C	EAX EAX EAX	FACW species     25     x2 =SO       FAC species     45     x3 =S       FACU species     x4 =       UPL species     x5 =       Column Totals:     75     (A)       Prevalence Index = B/A =S     (B)       Prevalence Index = B/A =S     (B)       Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation       X 2 - Dominizance Test is >50%       X 3 - Prevalence Index is \$3.01
d. J.d. J.d.	_ = Total C	EAX EAX EAX	FAC species     45     x3 = 105       FACU species     x4 =       UPL species     x5 =       Column Totals:     75     (A)       Prevalence Index = B/A =     7.53       Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation       X 2 - Dominance Test is >50%       X 3 - Prevalence Index is ≤3.01
d. la la	_ = Total C	EAX DE AND	FACU species       x 4 =         UPL species       x 5 =         Column Totals:       75         (A)       100         Prevalence Index = B/A =       7.53         Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation         X 2 - Dominizance Test is >50%       X 3 - Prevalence Index is ≤3.01
d la la		EAX DEAX DEAX	UPL species     x5 =       Column Totals:     □S       (A)     □G       Prevalence Index = B/A =     Z.SS       Hydrophytic Vegetation Indicators:     1 - Rapid Test for Hydrophytic Vegetation       X 2 - Dominizance Test is >50%       X 3- Prevalence Index is ≤3.0 <sup>1</sup>
d. L. L. L. L. L.			Column Totals:
ALA I		OF AN	Prevalence Index = B/A = <u>Z.55</u> Hydrophytic Vegetation Indicators: <u>1 - Rapid Test for Hydrophytic Vegetation</u> <u>X</u> 2 - Dominiance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
I PL'P	_	EAC.	Hydrophytic Vegetation Indicators:       1 - Rapid Test for Hydrophytic Vegetation       2 - Dominance Test is >50%       X     3 - Prevalence Index is ≤3.0 <sup>1</sup>
A	_	EK-1	1 - Rapid Test for Hydrophytic Vegetation     2 - Dominance Test is >50%     X 3- Prevalence Index is ≤3.0 <sup>1</sup>
A		EK-	∠ 2 - Dominance Test is >50%     ∠ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4		EVul	X_ 3- Prevalence Index is ≤3.0*
Ξ	-		
_			<ul> <li>4 - Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
			5 - Wetland Non-Vascular Plants*
	_		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
_			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
5	= Total Co	wer	be present, unless disturbed or problematic.
-			
_			Hydrophytic
_			Vegetation Vegetation
-	= Total Co	wer	
_			
		= Total Co	= Total Cover

## APN: 123-290-03 BIOLOGICAL SCOPING, WETLAND DELINEATIONS, & BOTANICAL SURVEYS

Profile Description: (Describe to the de	pth needed to document the indicator or confirm	the absence of indicators.)
Danth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type Loc	Texture Remarks
Tune CaConcentration DeDepletion R	M+Reduced Matrix, CS=Covered or Costed Sand Gr	ains <sup>b</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Solls <sup>3</sup> :
History (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Hatic Epleadon (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)	"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)	uniess disturbed or problematic
Restrictive Layer (if present):		
Type:		a tradition of the local
Depth (inches):		Hydric Soll Present? Yes No
YDROLOGY		
YDROLOGY Welland Hydrology Indicators:		
YDROLOGY Wetland Hydrology Indicators:	ed check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required)	red, check all that apply) Water Station Lawren (BSI) (except	Secondary indicators (2 or more required) Water-Stational Leaves (89) (MLRA 1, 2
PYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir X Surface Water (A1) High Water Table (A2)	red. check all that apply) Water-Stamed Leaves (89) (except MI R 1 2 4A and 4B)	Secondary indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A and 4B)
PYDROLOGY 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 (89) (except MIRA 1, 2, 4A, and 4B) Salt Cruck (811).	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 48) Drainace Patterns (810)
YDROLOGY           Wetland Hydrology Indicators:           Primary Indicators (minimum of one result           X           Surface Water (A1)          High Water Table (A2)          Surface Mater (A1)          High Water Table (A2)	red. check all that apply) Water-Stained Leaves (89) (except MLRA 1, 2, 4A, and 4B) Sait Crust (811) Anuarch (811)	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) DravSacon Water Table (C2)
IYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one result         X         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         X         Water Marks (B1)         Sectors Theorem (P2)	Ind. check all that apply) Water-Stained Leaves (89) (except MLRA 1, 2, 4A, and 4B) Salt Crust (811) Aquatic Invertebrates (813) Hudrosen Sulfa Oder (C1)	Secondary indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 48) Drainage Patterns (810) Dry-Season Water Table (C2) Saturation Visible on Aerial Imprary (C9)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir X Surface Water (A1) High Water: Table (A2) Saturation (A3) X Water Marks (B1) Sectiment Deposits (B2) Dath Deposits (B3)	ted. 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) Cruste All Decompositions shore ( Jains Boo	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2,     4A, and 48)     Drainage Patterns (810)     Dry-Season Water Table (C2)     Saturation Visite on Aarial Imagery (C9)     Geometric Position (72)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir X Surface Water (A1) High Water Table (A2) Saturation (A3) X Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Alloyd Marky (Count (B4)	ted. check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulf de Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (810) Dry-Season Water Table (C2) Saturation Visible on Aarial Imagery (C9) ds (C3) Geomorphic Position (D2) Shallow Admitant (D3)
IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Seciment Deposits (B2) Dint: Deposits (B3) Algal Mat or Crust (B4) (non Deposits (B5))	ted. check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulf de Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Record Iron Reduction in Tilled Sols (C6)	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (810) Dry-Season Water Table (C2) Saturation Visible on Aarial Imagery (C9) ds (C3) Geomorphic Position (D2) Shallow Aquitand (D3) FAC-Neurial Test (D5)
IYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required)         X         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         X         Water Marks (B1)         Seciment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B5)         X         Surface Soll Crust (B6)	ted. check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulf de Odor (C1) Oxidized Rhizospheres along Living Roo Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sols (C6 Stunted or Stressed Plants (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) dts (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D5) (LRR A)
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YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one requi)         X         High Water Table (A2)         Saturation (A3)         X         Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Crust (B4)         Iron Deposits (B6)         X Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (         Sparsely Vegetated Concave Surface         Field Obsorvations:         Surface Water Present?       Yes         Water Table Present?       Yes         Water Table Present?       Yes		Secondary Indicators (2 or more required)     Water Stained Leaves (89) (MLRA 1, 2,     4A, and 48)     Drainage Patterns (810)     Dry-Sesson Water Table (C2)     Saturation Visible on Aerial Imagery (C9)     ds (C3) Geomorphic Position (D2)     Shallow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7)
YDROLOGY           Wetland Hydrology Indicators:           Primary Indicators (minimum of one requi)           X           Surface Water (A1)           High Water Table (A2)           Saturation (A3)           X           Water Marks (B1)           Sectiment Deposits (B2)           Drift Deposits (B3)           Algal Mat or Crust (B4)           Iron Deposits (B5)           X           Surface Soil Cracks (B6)           Inundation Visible on Aerial Imagery ( Spansely Vegetated Concave Surface           Field Observations:           Surface Water Present?         Yes           Saturation Present?         Yes           Saturation Present?         Yes	ind. check all that apply)	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2, 44, and 48)     Drainage Patterns (810)     Dry-Sesson Water Table (C2)     Saturation Visible on Asriel Imagery (C9)     Stailow Aquitard (03)     FAC-Neutral Test (05)     Raised Ant Mounds (05) (LRR A)     Frost-Heave Hummooks (07) and Hydrology Present? Yes X No
YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required)         X Surface Water (A1)         High Water Table (A2)         Saturation (A3)         X Water Marks (B1)         Sediment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Cruat (B4)         Iron Deposits (B5)         X Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (Spansely Vegetated Concave Surface         Field Observations:         Surface Water Present?       Yes         Saturation Present?       Yes         Saturation Present?       Yes &         Includes capillary fringe)       Describe Recorded Data (stream gauge, recorded Data (stream gaug	ted. 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 Roc Presence of Reduction in Tilled Sols (C6) Recent fron Reduction in Tilled Sols (C6) Recent fron Reduction in Tilled Sols (C6) Stunted or Stressed Plants (D1) (LRR A) B7) Other (Explain in Remarks) (B8) No Depth (inches) Wets montoring weil, senial photos, previous Inspections).	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2,     4A, and 48)     Drainage Patterns (810)     Dry-Sesson Water Table (C2)     Saturation Visible on Aeriel Imagery (C9)     Geomorphic Position (D2)     Shallow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7) and Hydrology Present? Yes X No
Average of the second distance of the	ind. check all that apply)	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 48)     Drainage Patterns (810)     Dry-Sesson Water Table (C2)     Saturation Visible on Aeriel Imagery (C9) ds (C3) Geomorphic Position (D2)     Shallow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D5) (LRR A)     Frost-Heave Hummocks (D7) and Hydrology Present? Yes X No     faveilable:
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one required)         X Surface Water (A1)         High Water Table (A2)         Saturation (A3)         X Water Marks (B1)         Sectiment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Cruat (B4)         Iron Deposits (B6)         X Surface Soil Cracks (B6)         Surface Soil Cracks (B6)         Surface Soil Cracks (Concave Surface         Field Observations:         Surface Water Present?       Yes         Saturation Present?       Yes         Yutaer Table Present?       Yes         Saturation Present?       Yes         Saturation Present?       Yes         Describe Recorded Data (stream gauge, r         Remarks:       Statustion	ind. check all that apply)	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B)     Drainage Patterns (810)     Dry-Sesson Water Table (C2)     Saturation Visite on Aerial Imagery (C9)     Geomorphic Position (D2)     Shallow Aquitard (D3)     FAC-Neutral Test (D5)     Raised Ant Mounds (D6) (LRR A)     Frost-Heave Hummocks (D7) and Hydrology Present? Yes X No     faveilable:
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one result         X         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         X         Water Marks (B1)         Sectiment Deposits (B2)         Drift Deposits (B3)         Algal Mat or Cruat (B4)         Iron Deposits (B6)         X         Surface Soil Cracks (B6)         Invindation Visible on Aerial Imagery ( Sparsely Vegetated Concave Surface         Field Observations:         Surface Water Present?       Yes         Sturation Present?       Yes         Yeastion Present?       Yes         Saturation Present?       Yes         Mater Table Present?       Yes         Saturation Present?       Yes         Describe Recorded Data (stream gauge, r         Remarks:	ind. check all that apply)	Secondary Indicators (2 or more required)     Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)     Drainage Patterns (B10)     Dry-Sesson Water Table (C2)     Saluration 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)  and Hydrology Present? Yes X No faveilable:
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YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one requir  Surface Water (A1)  High Water Table (A2) Saturation (A3)  Water Marks (B1) Sediment Deposits (B2) Dift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery ( Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery ( Surface Water Present? Yes Saturation Present? Yes Saturation Present? Yes Saturation Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge, r Remarks:	ed. check all that apply)	Secondary Indicators (2 or more required)     Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B)     Drainage Patterns (810)     Dry-Season Water Table (C2)     Saturation Visible on Aarial Imagery (C9)     Geomorphic Position (02)     Shallow Aquitard (03)     FAC-Neutral Test (05)     Raised Ant Mounds (06) (LRR A)     Frost-Heave Hummocks (07) and Hydrology Present? Yes X No faveilable

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## WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

2700 N Highway 1, 123-290-03	ChriCounty Albi	on/Mendocino	Sampling Date: 05/30/2024	
Anglicant/Owner, M. Reimann		State: CA	Sampling Point: 05	
Investigator(s): S.Bradley, B. Huff	Section, Township	Section, Township, Range: 28, 16N, 17W Mount Diablo		
Landform (hillslope, terrace, etc.):	Local relief (conc	ave, convex, none):	Stope (%):	
Subregion (LRR): A4	Lat 39.21495	Long: 123.768444	Datum:	
Soil Map Unit Name: Flumeville		NWI class	ification:	
Are climatic / hydrologic conditions on the site	typical for this time of year? Yes	No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydro	logy significantly disturbed?	Are "Normal Circumstances	s" present? Yes X No	
Are Vegetation, Soll or Hydro	logy naturally problematic?	(If needed, explain any ans	wers in Remarks.)	

# SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>X</u> Yes <u></u> Yes	No No No	Is the Sampled Area within a Wetland?	Yes No
Remarks:				

## VEGETATION - Use scientific names of plants.

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1)	<u>% Cover</u> Species? Status	Number of Dominant Species (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4	= Total Cover	Percent of Dominant Species A/B (A/B)
Sapling/Shrub Stratum (Plot size:)		Prevalence Index worksheet:
6		Total % Cover of: Multiply by:
2		OBL species 0 x1= 0
3		FACW species OO x2= 0
4		FAC species x3=
5		FACILITATION 10 XAN 40
	- Total Cover	URI species vite
Herb Stratum (Plot size:)	15 54	
i. Eauserum antrise		
2 AChilles MILLETOWAR	BX11	Prevalence Index = B/A =
3 Mentha Dileanno	10 CB	Hydrophytic Vegetation Indicators:
4 TUXUS Kuffehight	FANJ	1 - Rapid Test for Hydrophytic Vegetation
5 Tatolula Longshipld	EACUL	X 2 - Dominance Test is >50%
6		X 3 - Prevalence Index is ≤3.0'
7		4 - Morphological Adaptations' (Provide supporting
8		data in reemarks or on a separate silenty
9		- 5- Wetland Non-Vescular Plants
10.		Problematic Hydrophytic Vegetation' (Explain)
11.		Indicators of hydric soil and wetland hydrology must
	Total Cover	be present, unless discurbed or problematic
Woody Vine Stratum (Plot size)		
1		Hydrophytic
2		Vegetation
	- Total Cover	Present/ res Ho
% Bare Ground in Herb Stratum		
Remarks.		

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

rofile Description: (Describe to the des	oth needed to document the indicator or confirm	the absence o	f Indicators.)
Denth Matrix	Redox Features		
inches) Color (maist) %	Color (moist) % Type Loc <sup>2</sup>		Remarks
	· ·		
The Origination DeDepletion Ph	-Parturent Matrix, CSaCovered or Costed Sand G	ains. Loca	tion: PL=Pore Lining, M=Matrix
Type: C=Concentration, D=Cepiedon, Riv type: Solt Indicators: (Applicable to al	ILRRs, unless otherwise noted.)	Indicator	s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)	2 cm	Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red F	Parent Material (1+2)
Black Histic (A3)	<ul> <li>Loamy Mucky Mineral (F1) (except MLRA 1)</li> </ul>	Very	Shallow Dark Surface (1F12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Osner	(Explain in Petrancs)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Indicator	of hydrophytic vegetation and
Thick Dark Surface (A12)	Redox Dark Surface (P0)	wetlan	d hydrology must be present.
Sandy Mucky Mineral (S1) Sandy Claused Martin (S4)	Redox Decressions (FB)	unless	disturbed or problematic.
Restrictive Layer (if present):	- Heavy Depressioner of		
Type		100	
Dooth (Inches):		Hydric Soil F	Present? Yes No
Designed and			
Kemans:			
NUTROLOGY Wetland Hydrology Indicators:			
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# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

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nstances" present? Yes X No
any answers in Remarks.)
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ansects, important reatures, etc.
YesNoX
Test worksheet:
Iominant Species
IL FACW, or FAC: (A)
er of Dominant
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al, FACW, or FAC: 17.6 (A/8)
Index worksheet:
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ies x 2 =
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lence Index = B/A =
c Vegetation Indicators:
Id Test for Hydrophytic Vegetation
unance rest is 200%
mbolyoical Adaptations <sup>1</sup> (Provide supporting
in Remarks or on a separate sheet)
land Non-Vascular Plants*
matic Hydrophytic Vegetation <sup>1</sup> (Explain)
of hydric soil and wetland hydrology must
uniess disturbed or problematic.
le
Yes No
-

rofile Description: (Describe to the dep	oth needed to document the indicator or continue	
Depth Matrix	Redox Features	Texture Demarks
nches) Color (moist) %	Color (moist) % Type Loc	Texture Romana
a a constant of Constantian Diff.	-Bad and Matrix CS-Covered or Coaled Send Gra	ains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Type: C=Concentration, D=Depletion, Ro	I PRe unless otherwise noted 1	Indicators for Problematic Hydric Soils <sup>1</sup> :
ydric Soll Indicators: (Applicable to al	Crede Deday (PE)	2 cm Muck (A10)
_ Histosol (A1)	Sanoy Redox (SS)	Red Parant Material (TF2)
_ Histic Epipedon (A2)	Learny Murrier Mineral (E1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
Black Histic (A3)	Loamy Gauge Matrix (F2)	Other (Explain in Remarks)
_ Hydrogen Suttice (A4)	Declated Matrix (F3)	
_ Depleted Below Dark Schade (A17)	Redov Datk Surface (F5)	*Indicators of hydrophytic vegetation and
Cando Munici Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present.
Sandy Gleved Matrix (S4)	Redax Depressions (F8)	unless disturbed or problematic
Carify Groves many (04)	- 1979 - 1979 - 1979	
Carrienve cayer (n present):		
туре:		Hydric Soll Present? Yes No
Depth (inches):		
VDROLOGY		
YDROLOGY		
YDROLOGY Netland Hydrology Indicators:	ed check all that apply!	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one result	ed check all that appivi Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2,
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one result Surface Water (A1) Mich Water Table (A2)	od: check all that accivi Water-Stained Leaves (89) (except MLRA 1, 2, 4A, and 48)	Secondary indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 48)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one result Surface Water (A1) High Water Table (A2) Soburtion (A2)	ed: check all that accivi Water-Stained Leaves (80) (except MLRA 1, 2, 4A, and 48) Salt Crust (811)	Secondary indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 48) Drainage Patterns (810)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one repult Surface Water (A1) High Water Table (A2) Seturation (A3) Moder Media (B1)	od: check all that accivi Water-Stained Leaves (B0) (except MLRA 1, 2, 4A, and 48) Salt Crust (B11) Anustic (morteboates (B13)	Secondary indicators (2 or more required) Water-Stained Leaves (89) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (810) Dry-Season Water Table (C2)
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14. ABSTRACT This document is on	e of a series of Region	al Supplements to the C	orps of Engineer	Wetland Delin	neation Manual, which provides
14. ABSTRACT This document is on technical guidance a Section 404 of the C nationwide effort to cedures. This supple Arizona, California,	e of a series of Region nd procedures for ider lean Water Act or Sec address regional wetla ment is applicable to t Colorado, Idaho, Mor	al Supplements to the O tifying and delineating tion 10 of the Rivers and nd characteristics and i he Western Mountains, tana, Nevada, New Me	Corps of Engineer wetlands that may d Harbors Act. Th mprove the accurs Valleys, and Coa xico, Oregon, Sou	wetland Delin r be subject to a se development sey and efficient st Region, white ath Dakota, Uta	neation Manual, which provides regulatory jurisdiction under t of Regional Supplements is part of acy of wetland-delineation pro- ch consists of portions of 12 states: h, Washington, and Wyoming.
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<ol> <li>ABSTRACT</li> <li>This document is on technical guidance a Section 404 of the C nationwide effort to cedures. This supple Arizona, California,</li> <li>SUBJECT TERMS Delineation Hydrology</li> <li>SECURITY CLASS</li> </ol>	e of a series of Region nd procedures for ider lean Water Act or Sec address regional wella ment is applicable to t Colorado, Idaho, Mor	al Supplements to the O tifying and delineating tion 10 of the Rivers an ind characteristics and i he Western Mountains, tana, Nevada, New Me Plant communities Soil	Tr. LIMITATION OF ABSTRACT	vetland Delin r be subject to i the development scy and efficient st Region, while th Dakota, Uta th Dakota, Uta Vege Vege Wetla 18. NUMBER OF PAGES	neation Manual, which provides regulatory jurisdiction under t of Regional Supplements is part of new of wetland-delineation pro- ch consists of portions of 12 states: h, Washington, and Wyoming. tation ands 19a. NAME OF RESPONSIBLE PERSON
<ul> <li>ABSTRACT         This document is on technical guidance a Section 404 of the C nationwide effort to cedures. This supple Arizona, California,     </li> <li>15. SUBJECT TERMS Delineation Hydrology         16. SECURITY CLASS     </li> </ul>	e of a series of Region nd procedures for ider lean Water Act or Sec address regional wella ment is applicable to t Colorado, Idaho, Mor SIFICATION OF: b. ABSTRACT	al Supplements to the O tifying and delineating tion 10 of the Rivers and nd characteristics and is he Western Mountains, tana, Nevada, New Mo Plant communities Soil c. THIS PAGE	orps of Engineers wetlands that may d Harbors Act. The mprove the accurs Valleys, and Coa xico, Oregon, Sou xico, Oregon, Sou 17. LIMITATION OF ABSTRACT	vetland Delia r be subject to in the development sey and efficient st Region, while th Dakota, Uta th Dakota, Uta Vege Vege Wetla 18. NUMBER OF PAGES	neation Manual, which provides regulatory jurisdiction under t of Regional Supplements is part of new of wetland-delineation pro- ch consists of portions of 12 states: th, Washington, and Wyoming. the Washington, and Wyoming. 190, NAME OF RESPONSIBLE PERSON 190, TELEPHONE NUMBER (netude sense order)

CONTRACT.

# WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

roject/Site: 2700 N Highway 1, 123-290-03	City/County. Albiotow	Samping Date.
policant/Owner: M. Reimann		State: CA Sampling Point
vestigator(s) S.Bradley, B. Huff	Section, Township, Ra	nge: 28, 16N, 17W Mount Diablo
andform (hillslope, terrace, etc.):	Local rollef (concave,	convex, none): Slope (%):
ubregion (LRR): A4	Lat 39.21495	Long: 123.768444 Datum:
oi Mao Linit Name- Flumeville		NWI classification:
a atmatic / buriclinic conditions on the site typical for th	is time of year? Yes No_	(If no, explain in Remarks.)
re Vensiation Soil or Hydrology	significantly disturbed? Are	"Normal Circumstances" present? Yes X No
re vegetation, doi, or style begy	osturally nothiematic? (If th	eeded, explain any answers in Remarks.)
IMMADY OF FINDINGS - Attach site map	showing sampling point	locations, transects, important features, etc.
	No.	
Hydrophytic Vegetation Preservity Tes	No Is the Sampled	d Area
Wetland Hydrology Present? Yes	No within a Wetla	nd? Yes No
Remarks.		
FGETATION - Use scientific names of pla	nts.	
	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species
1. <u></u>		That Are OBL, FACW, or FAC
2		Total Number of Dominant
3		Species Across All Strata: (6)
4	- Total Cause	Percent of Dominant Species 72.74 (ARI)
Senlino/Shrub Stratum (Piot size: )	2 1021 Cover	That Are UBL, FACW, or FAC, (vo)
1.7 antedescia dethiopica	102 03	Total % Course of Multiply by
2		OBL species 70 x1= 70
3/		FACW scecies 25 x2= 50
4		FAC species 0 x3= 80
5		FACU species x 4 =
Hard Taraban (Televised	= Total Cover	UPL species x 5 =
· Diabtana Labalata	102 FAV	Column Totals: 50 (A) 00 (B)
· TUNUS OHOUS	152 ENG	Drevalence Index a B/A = 7
TUDAL PHUSIC	ID DEL.	Hydrophytic Vegetation Indicators:
A TEADILING WOODSKIPHI	ID FAC	1 - Rapid Test for Hydrophytic Vegetation
5		2 - Dominance Test is >50%
5		X 3 - Prevalence Index is \$3.0
7		4 - Morphotogical Adaptations <sup>1</sup> (Provide supporting
8		data in Hemanics of on a separate sneet)
9		Disblamatic Hudronbutic Viscatation <sup>1</sup> (Evolution)
10		Indicators of hydric soil and welland hydrolom must
n	XEL STRUCT	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: )	- Total Cover	
1.		Hydrophytic
2		Vegetation Veg X
	= Total Cover	Prosent/ 105 NO
th		
% Bare Ground in Herb Stratum		
% Bare Ground in Herb Stratum		

Redox Features r (moist) % Type Loc	Texture Remarks
vr (moist) % Type Loc	Texture Remarks
	di continer Di aPora Linino MaMatrix.
iced Matrix, CS=Covered or Coated Sand C	Indicators for Problematic Hydric Soils <sup>1</sup> :
, unless otherwise noted.)	2 cm Muck (A10)
Jandy Redox (35)	Red Parent Materiai (TF2)
Stripped Matrix (50)	1) Very Shallow Dark Surface (TF12)
OBENY MUCKY MITHERS (F1) (WACKPY MICHAY	Other (Explain in Remarks)
Content Matrix (FS)	
Peday Dark Surface (F6)	<sup>5</sup> Indicators of hydrophytic vegetation and
Dapleted Dark Surface (F7)	wetland hydrology must be present.
Redox Depressions (F8)	unless disturbed or problematic.
	Hydric Soil Present? Yes No
tck all that apply)	Secondary Indicators (2 or more (equired)
Water-Stained Leaves (89) (except	Water-Stained Leaves (89) (MLRA 1, 2,
MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Salt Crust (B11)	Drainage Patterns (B10)
<ul> <li>Aquatic Invertebrates (B13)</li> </ul>	Dry-Season Water Table (C2)
Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (CS
Oxidized Rhizospheres along Living R	Roots (C3) Geomorphic Position (D2)
Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Recent Iron Reduction in Titled Solls (	(C5) FAC-Neutral Test (D5)
Stunted or Stressed Plants (D1) (LRR)	(A) Raised Ant Mounds (D6) (LRR A)
Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
1	
X Depth (inches):	
C Depth (inches):	V
Depth (inches): Wi	fetland Hydrology Present? Yes A No
-	at if scalable
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APN: 123-290-03 BIOLOGICAL SCOPING, WETLAND DELINEATIONS, & BOTANICAL SURVEYS

# APPENDIX E: LIST OF SPECIES

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
pink sand verbena Abronia umbellata var. breviflora	Rank 1B	A perennial herb found on coastal dunes, coastal strand; located on foredunes and interdunes with low vegetation cover. Elevation range: 0 - 10 meters. Blooms: June - October.	No Potential. The Study Area is above the accepted elevation range and no suitable habitat exists.	Not Present. No suitable habitat present
Blasdale's bent grass Agrostis blasdalei	Rank 1B	A perennial rhizomatous herb found on coastal dunes, coastal bluff scrub, coastal prairie; located on sandy to gravelly substrate close to rocks of bluff faces. Typically located in nutrient poor areas with sparse vegetation cover. Elevation range: 0 - 150 meters. Blooms: May - July.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present during the scoping survey; completed outside of this species blooming season
pygmy manzanita Arctostaphylos nummularia ssp. mendocinoensis	Rank 1B	A perennial evergreen shrub found in closed-cone coniferous forests with acidic sandy clay. Typically found in pygmy-pine forest or chapparal. Elevation range: 50 - 200 meters. Blooms: January.	No Potential. The Study Area lacks appropriate soils for this species.	Not Present. No suitable habitat present
Humboldt County milk-vetch	Rank 1B	A perennial herb found in broadleaved upland forest, North coast coniferous forests; openings and disturbed areas. Elevation range: 120 - 180 meters. Blooms: April - September.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Thurber's reed grass	Rank 2B	An annual rhizomatous herb is found in coast scrub (mesic) and freshwater marshes and swamps. Elevation range: 10 - 60 meters. Blooms: May - August.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present during the scoping survey; completed outside of this species blooming season
coastal bluff morning-glory			<b>High Potential.</b> The	Not Present during the

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
Calamagnostis crassialumis	капк 28	meters. Blooms: May - August.	there are no known occurences in the vicinity	the protocol- level scoping survey.
			llich Detential The	Net Dresent No.
coastal bluff morning-glory Calystegia purpurata ssp.	Rank 1B	A perennial herb found on coastal dunes, coastal scrub; located on coastal bluffs. Elevation range: 0 - 105 meters. Blooms: May - September.	Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	individuals were identified during the protocol- level scoping survey.
California sedge		A parannial rhizomatous barb found in bass and fons, closed		
Carex californica	Rank 2B	cone coniferous forests, coastal prairie, meadoes, marshes and swamps; located in drier area of swamps, bots and marsh margins. Elevation range: 90 - 335 meters. Blooms: May - August.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
livid sedge Carex livida	Rank 2A	A perennial rhizomatous herb found in bogs and fens. Typically associated with sphagnum swamps and peatlands. Elevation: range: unknown. Blooms: unknown.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Lyngbye's sedge Carex lyngbyei	Rank 2B	A perennial rhizomatous herb found in marshes and swamps, brackish or fresh water. Elevation: 0 - 10 meters. Blooms: May - July.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
deceiving sedge Carex saliniformis	Rank 1B	A perennial rhizomatous herb found in coastal prairie, coastal scrub, marsh & swamp, meadow & seep, pond shores and wet openings. Elevation range: 3 - 320 meters. Blooms: May - July.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Humboldt Bay owl's-clover Castilleja ambigua var. humboldtiensis	Rank 2B	An annual semiparasitic herb ound in marsh and swamp, salt marsh, wetland. Elevation range: 0 - 3 meters. Blooms: April - August.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Oregon coast paintbrush Castilleja litoralis	Rank 2B	A perennial hemiparasitic herb found in sandy soils associated with coastal bluff scrub, dunes, and scrub. Elevation range: 15 100 meters. Blooms: June.	<b>High Potential.</b> The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
Mendocino Coast paintbrush Castilleja mendocinensis	Rank 1B	A perennial hemiparasitic herb found in coastal bluff scrub, coastal scrub, coastal prairie, closed-cone coniferous forest, coastal dune; typically located on open sea blufs and cliffs. Elevation range: 0 - 160 meters. Blooms: April - August.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
Howell's spineflower	Rank 1B	This annual herb is found in sandy areas of coastal dunes, coastal prairies and coastal scrub. Elevation range: 0 - 45 meters. Blooms: May - July.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Oregon goldthread	Rank 4.2	A perennial rhizomatous herb found in meadows and seeps, North coast coniferous forests, wetlands and streambanks. Elevation range: 500 - 2000 meters. Blooms: February - November	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
bunchberry Cornus unalaschkensis	Rank 2B	A perennial rhizomatous herb found in bogs and seeps, meadows and fens associated with north coast coniferous forests. Elevation range: 60 - 1920 meters. Blooms: May - July.	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Mendocino dodder Cuscuta pacifica var. papillata	Rank 1B	An annual parasitic vine found on coastal dunes. Elevation range: 0 - 50 meters. Blooms: June - October.	<b>No Potential.</b> The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
swamp harebell Eastwoodielia californica	Rank 1B	A perennial rhizomatous herb found in bogs and fens, closed- cone coniferous forests, coastal prairie, meadows, freshwater marsh, North coast coniferous forests, typically located in wetlands within a varieity of surounding habitats. Elevation range: 1 - 405 meters. Blooms: June - October.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
supple daisy Erigeron supplex	Rank 1B	A perennial herb found on coastal bluff scrub, coastal prairie. Elevation range: 10 - 50 meters. Blooms: May - July.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
bluff wallflower Erysimum concinnum	Rank 1B	An annual/perennial herb found on cliffs, coastal bluffs, dunes and prairies. Elevation: 0 - 185 meters. Blooms: March - June.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Pacific gilia Gilia capitata ssp. pacifica	Rank 1B	An annual herb found in the chapparal, coastal bluff scrub, coastal prairie, valley and foothill grasslands. Elevation: 5 - 1665 meters. Blooms: April - August	<b>High Potential.</b> The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
dark-eyed gilia Gilia millefoliata	Rank 1B	An annual herb found in coastal dune habitat. Elevation range: 2 - 30 meters. Blooms: April - June.	No Potential. The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
short-leaved evax Hesperevax sparsiflora var. brevifolia	Rank 1B	An annual herb found in coastal bluff scrub, coastal dune; located on sandy bluffs and flats near the immediate coastline. Elevation range: 0 - 215 meters. Blooms: March - June.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
pygmy cypress Hesperocypress pygmaea	Rank 1B	A perennial evergreen tree found in a closed-cone coniferous forest; located on podzol-like soils (Blacklock series). Elevation range: 30 - 600 meters.	No Potential. The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
hair-leaved rush Juncus supiniformis	Rank 2B	A perennial rhizomatous herb found near the coast in bogs and fens and freshwater marshes and swamps. Elevation range: 20 - 100 meters. Blooms: April - May.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
small groundcone Kopsiopsis hookeri	Rank 2B	A perennial rhizomatous herb, often parasitic, found in north coast coniferous forests. Elevation range 90 - 885 meters. Blooms: April - August.	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Baker's goldfields Lasthenia californica ssp. bakeri	Rank 1B	A perennial herb found in closed-cone coniferous forests, coasts scrub; located in openins in scrub and coastal forest habitat. Elevation range: 60 - 250 meters. Blooms: April - October	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
perennial goldifelds Lasthenia californica ssp. macrantha	Rank 1B	A perennial herb found in coastal bluff scrub, coastal dune, and coastal scrub. Elevation range: 0 - 500 meters. Blooms: January - November.	<b>High Potential.</b> The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
marsh pea Lathyrus palustris	Rank 2B	A perennial herb found in bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, marsh and swamp, north coast coniferous forest, wetlands. Elevation: 1 - 100 meters. Blooms: March - August.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
coast lily Lilium maritimum	Rank 1B	A perennial bulbiferous herb found in closed-cone coniferous forest, coastal prairie, coastal scrub, broadleaf upland forests and North Coast coniferous forests; typically located on sandy soils, often in raised hummock or bogs and roadside ditches. Elevation range: 5 - 475 meters. Blooms: May - August.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
northern microseris Microseris borealis	Rank 2B	This perennial herb is found in bogs and fens and meadows and seeps associated with lower montane coniferous forests. Elevation range: 1000 - 2000 meters. Blooms: June - September.	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
leafy -stemmed mitrewort Mitellastra caulescens	Rank 4.2	This perennial rhizomatous herb is found in mesic habitats associated with broadleafed upland forests, lower montane coniferous forests and the north coast coniferous forests. It is usually found in meadows and seeps. Elevation range: 5 - 1700 meters. Blooms: March - October.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
seacoast ragwort Packera bolanderi var. bolanderi	Rank 2B	A perennial rhizomatous herb found in north coast coniferous forests and coastal scrub habitats. Elevation range: 10 - 170 meters. Blooms: March - May.	<b>No Potential.</b> The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
North Coast phacelia Phacelia insularis var. continentis	Rank 1B	An annual herb found in sandy and sometimes rocky soils in coastal bluff scrub and coastal dunes. Elevation range: 10 - 170 meters. Blooms: March - May.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.
Bolander's beach pine Pinus contorta ssp. bolanderi	Rank 1B	A perennial evergreen tree that is found in closed-cone coniferous forests with podzol-like soils. Elevation range: 75 - 250 meters. Blooms: unknown.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
white-flowered rein orchid Piperia candida	Rank 1B	A perennial herb that sometimes exists in serpentine soil. Broad leaved upland forest, lower montane coniferous forest, North coast coniferous forests. Elevation range: 30 - 1310 meters. Blooms: March - May.	No Potential. The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
angel's hair lichen Ramalina thrausta	Rank 2B	An epiphytic fruticose lichen found on dead twigs and other lichen in north coast coniferous forests. Elevation range: 75 - 430 meters.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
white beaked-rush	Rank 2B	A perennial rhizomatous herb found in freshwater marshes and swamps, meadows and seeps and bogs and fens. Elevation range: 60 - 2040 meters. Blooms: June - August.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
great burnet Sanguisorba officinalis	Rank 2B	A perennial rhizomatous aquatic herb found in wetland habitats associated with the north coast coniferous forests: bogs and fens, meadows and seeps and marshes and swamps. Elevation range: 60 - 1400 meters. Blooms: July - October.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Point Reyes checkerbloom Sidalcea calycosa ssp rhizomata	Rank 1B	A perennial rhizomatous herb found in freshwater marshes and swamps located near the coast. Elevation range: 3 - 75 meters. Blooms: April - September.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
maple-leaved checkerbloom Sidalcea malachroides	Rank 4.2	A perennial herb often found in disturbed areas. Broad leaved upland forest, coastal prairie, coastal scrub, north coast coniferous forests, ripairan woodland. Elevation range: 0 - 730 meters. Blooms: March - August.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
Siskiyou checkerbloom Sidalcea malviflora ssp. Patula	Rank 1B	A perennial rhizomatous herb assocated with coastal bluff scrub, coastal prairie and north coast coniferous forests. Elevation range: 15 - 880 meters. Blooms: April - August.	High Potential. The Study Area is within the accepted elevation range, has appropriate habitat and has known occurences in the area.	Not Present. No individuals were identified during the protocol- level scoping survey.
purple-stemmed checkerbloom Sidalcea malviflora ssp. purpurea	Rank 1B	A perennial rhizomatous herb that lives in broad leaved upland forest and coastal prairies. Elevation range: 15 - 85 meters. Blooms: May - June.	Moderate Potential. The Study Area has appropriate habitat but there are no known occurences in the vicinity	Not Present. No individuals were identified during the protocol- level scoping survey.

			POTENTIAL TO	
			OCCUR IN	SURVEY
SPECIES	STATUS*	HABITAT REQUIREMENTS	STUDY AREA	RESULTS
Hoffman's bristly jewelflower Streptanthus glandulosus ssp. Hoffmanii	Rank 1B	An annual herb found in often serpentinite soils in chaparral, cismontane wooldand and valley and foothill grasslands. Elevation range: 120 - 475 meters. Blooms: March - July.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Santa Cruz clover	Rank 1B	An annual herb found in gravelly margins of broadleafed upland forests, cismontane woodland and coastal prairie. Elevation range: 105 - 610 meters. Blooms: April - October.	<b>No Potential.</b> The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present
Monterey clover Trifolium trichocalyx	Rank 1B	An annual herb that lives in closed-cone coniferous forest (sandy openings, burned areas). Elevation range: 30 - 305 meters. Blooms: April - June.	No Potential. The Study Area lacks appropriate habitat.	Not Present. No suitable habitat present
Methuselah's beard lichen Usnea longissima	Rank 4.2	A fruticose lichen found on tree branches, usually on old growth hardwoods and conifers, broad leaved upland forest, north coast coniferous forests. Elevation range: 50 - 1460 meters. Blooms: unknown.	No Potential. The Study Area is below the accepted elevation range.	Not Present. No suitable habitat present

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
Point Areana mountain beaver Aplodontia rufa nigra	Endangered	Burrow sites are typically found on moist and steep north facing slopes or gullies with well-drained and friable soil. Studies suggest that the most important factors in habitat use are cool thermal regime, adequate soil drainage and softness and abundant food supply and a high percentage of cover of lush herbaceous and small diameter woody plants. Found in mesic coastal scrub, nortern dune scrub, the edges of conifer forest and riparian plant communities.	<b>No Potential.</b> The Study Area is outside of the known range of this particular species.
Sonoma tree vole Arborimus poma	Decreasing	Inhabits northwestern California, from Freestone, Sonoma County north through Mendocino, Humboldt and western Trinity counties to the south fork of the Smith River, Del Norte County. Habitat consists of mixed evergreen forests, wet and mesic old growth Douglas fir forests. Nests in trees 2 - 50 meters above the ground.	<b>No Potential.</b> The Study Area lacks appropriate habitat for this particular species.
Pacific tailed frog Ascaphus truei	Least Concern	Range includes Cascade Mountains and Pacific coastal areas of North America. Can be found in clear, cold, swift-moving mountain streams with course substrates. Primarily in older forest sites, requires microclimate conditions that are more common in older forests.	<b>No Potential.</b> The Study Area lacks appropriate habitat for this particular species.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
Obscure bumble bee Bombus caliginosus	Vulnerable	Range includes Mediterranean California and the Pacific coast. Inhabits open grassy coastal prairies and coast range meadows. Nesting occurs underground as well as above ground in abandoned bird nests.	High Potential. Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
Western bumble bee Bombus occidentalis	Decreasing	Occurs along the West Coast and Mountain West of North America from Arizona, New Mexico and Mediterranean California, north through the Pacific Northwest. This species nests underground in cavities such as old squirrel and other animal nests.	High Potential. Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
marbled murrelet Brachyramphus marmoratus	Endangered	Occurs in California, Oregon, Washington, British Colombia, south-east Alaska, Prince William Sound, Kenai Peninsula, Lower Cook Inlet, Barren Islands, Afognack and Kodiak Islands amongst other locations. Nests in old-growth and older-aged trees; forested areas with multiple canopy layers and high moss abundance are strongly preferred.	<b>No Potential.</b> The Study Area lacks appropriate habitat for this particular species.
Mendocino Ieptonetid spider Calileptoneta wapiti	None	Occurs in northern California coniferous forests.	No Potential. The Study Area lacks appropriate habitat for this particular species.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
Townsend's big- eared bat			
Corynorhinus townsendii	Least Concern	Found in a variety of locations that rane from coniferous forests and woodlands, deciduous riparian woodland, semi-desert and montane shrublands. The most common is evergreen forests.	<b>High Potential.</b> Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
white-tailed kite	Least Concern	Uses trees with dense canopies for cover. Forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands.	<b>High Potential.</b> Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys
North American porcupine Erthizon dorsatum	None	Occurs in the southern half of Canada, and northern and western United States, as well as scattered populations throughout the eastern US. Found in a wide variety of habitats including dense forests, tundra grasslands and destert shrub communities.	No Potential. The Study Area lacks appropriate habitat for this particular species.
tufted puffin Fratercula cirrhata	Decreasing	This species has a very large range, including islands and rocky outcroppings along the coastlines.	No Potential. The Study Area lacks appropriate habitat for this particular species.
Pomo bronze shoulderband Helminthoglypta arrosa pomoensis	Critically imperiled	Range is heavily redwood-timbered canyons of Mendocino County.	No Potential. The Study Area lacks appropriate habitat for this particular species.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
lotis blue butterfly Plebejus anna lotis	Endangered	This species probably occurred in wet meadows and sphagnum willow bogs.	High Potential. Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
Purple martin Progne subis	Least Concern	This species is widely but locally distributed in forest and woodland areas at low to intermediate elevations. They are found in broadleaved upland forest, lower montane coniferous forests.	No Potential. The Study Area lacks appropriate habitat for this particular species.
Northern red-legged frog Rana aurora	Least Concern	Range extends from southwestern British Colombia to northwestern California. In vicinity of quiet permenant waters of streams, marshes or ponds. Sometimes found in damp woods and meadows some distance from water. Occurs in sites with dense vegetation close to water and some shading.	<b>High Potential.</b> Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
Foothill yellow- legged frog Rana boylii	Decreasing	Range extends from Pacific drainages from the upper reaches of the Willamette River system to the San Gabriel River. Inhabits partially shaded, rocky streams at low to moderate altitudes in areas of chaparral, open woodland and forest.	<b>No Potential.</b> The Study Area lacks appropriate habitat for this particular species.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
California red-legged frog Rana draytonii	Decreasing	Range extends from southern Mendocino County to northernwestern Baja California. Inhabits in or near quiet permanent water of streams, marshes, ponds, lakes and other quiet bodies of water.	<b>High Potential.</b> Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
Southern torrent salamander Rhyacotriton variegatus	Stable	Range extends from southern Mendocino County through Polk, Tillamook and Yamhill counties, Oregon. Inhabits coastal coniferous forests in small, cold, clear high-gradient mount streams and spring seepages.	<b>No Potential.</b> The Study Area lacks appropriate habitat for this particular species.

SPECIES	STATUS	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA
Behren's silverspot butterfly Speyeria zerene behrensii	Endangered	An occupied or potential site must have two key resources: 1) caterpillar host plants; and 2) adult nectar sources. Distribution of the Behren's silverspot butterfly is highly dependent on these resources. Coastal terrace prairie is a dense grassland dominated by perennial grasses, on sandy loam soils on marine terraces below about 330 meters elevation and within the zone of coastal fog. In addition to perennial and annual grasses, the coastal prairie vegetation includes bracken ferns and woody shrubs and trees such as coyote brush, red alder, salal, and conifers. Violets, in particular the early blue violet, need to be present, as they are the butterfly's larval host plant. Nectar sources need to be available for foraging adults during the summer flight period. In addition to availability of violets and nectar plants, areas with shelter from wind may affect habitat suitability. The coastal prairies within the species range are frequently windy during the butterfly flight season, with winds predominantly from the northwest. Trees and large shrubs, as well as topographic features, can provide sheltered pockets, where microclimates are more favorably flight and essential activities during windy periods.	<b>High Potential.</b> Appropriate habitat exists for this species, but no individuals were seen during protocol-level surveys.
Red-bellied newt Taricha rivularis	Least Concern	Range extends from Honeydew, Humboldt County to the Russian River, Sonoma County. Inhabits mountain streams and rivers in coastal woodlands and redwood forests.	No Potential. The Study Area lacks appropriate habitat for this particular species.

# APPENDIX F: REDUCED BUFFER ANALYSIS

Analysis of the proposed project utilizing Mendocino County LCP ordinance section 20.496.02(a) through (k).

Development Criteria	
(1) Width. The width of the buffer area	There is no feasible alternative to
shall be a minimum of one hundre (100)	proposed developments within the
feet, unless an applicant can demonstrate,	ESHA buffer given site and legal
after consultation and agreement with the	constraints. Impacts are considered to
Department of California Fish and Wildlife	be of minor significance due to the
and County Planning staff, that one hundred	specific characteristics of the wetlands
feet is not necessary to protect the resources	being impacted.
of that particular habitat area from possible	
significant disruption caused by the	No new land division is proposed.
proposed development. The buffer area	
shall be measured from the outside edge	
of the Environmentally Sensitive Habitat	
Areas and shall not be less than fifty (50)	
feet in width. New land division shall not be	
allowed which will create new parcels	
entirely within the buffer area.	
Developments permitted within a buffer	
area shall generally be the same as those	
uses permitted in the adjacent	
Envionmentally Sensitive Habitat Area.	
Standards for determining the appropriate	
width of the buffer area are as follows:	
(a) Biological Signicance of Adjacent Lands.	
Lands adjacent to a wetland, stream, or riparian	

habitat area vary in the degree to which they are functionally related to these habitat areas. Functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on ajacent lands. The degree of significance depends upon the habitat requirements of the species in the habitat area (e.g. nesting, feeding, breeding, or resting). Where a significant functional relationship exists, the land supporting this relationship shall also be considered to be part of the ESHA, and the buffer zone shall be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationship exist, the buffer shall be mesured from the edge of the wetland, stream, or riparian habitat that is adjacent to the proposed development.	No significant relationship exists between the lands adjacent to the wetlands.
(b) Sensitivity of Species to Disturbance. The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination shall be based on the following after consultation with the Department of Fish and Wildlife or others with similiar expertise.	No rare, threatened or endangered plants or animals are known to utilize the existing wetland areas as habitat. The potential impacts associated with the already installed county-permitted driveway will not signifcanly disturb other "sensitve" species which may be associated with the ESHA's.
(i) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species;	Habitat is of poor quality for fish and wildlife species.
(ii) An assessment of the short-term and long- term adaptability of various species to human disturbance.	Associated species are considered to be highly adaptable to disturbance at the levels expected.

(iii) An assessment of the impact and activity levels of the proposed development on the resource.	Impacts are considered to be of minor significance due to the specific characteristics of the wetlands being impacted. Impacts will not vary significantly with expected activity levels.
c) Susceptibility of Parcel to Erosion. The width of the buffer zone shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.	Impacts from erosion are expected to be minimal due to slope and best management practices that will be implemented for development.
(d) Use of Natural Topographic Features to Locate Development. Hills and bluffs adjacent to ESHA's shall be used, where feasibie, to buffer habitat areas. Where otherwise permitted, development should be located on the sides of hills away from ESHA's. Similiarly, bluff faces should not be developed but shall be included in the buffer zone.	It is not feasible to locate development according to topographical features.
(e) Use of Existing Cultural Features to Locate Buffer Zones. Cultural features (e.g. roads and dikes) shall be used, where feasible, to buffer habitat areas. Where feasible, development shall be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the ESHA.	No existing cultural features provide added buffering capabilities.
(f) Lot Configuration and Location of Existing Development. Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer zone for any new development permitted. However, if that distrance is less than one hundred (100) feet, additional mitigation measures (e.g. planting of native vegetation) shall be provided to insure addtional protection. Where development is proposed in an area that is largely undeveloped, the widest and most protective buffer zone feasibile shall be required.	Mitigation measures are outlined in report and are designed to account for potential impacts to wetlands.
--	--
(g) Type and Scale of Development Proposed. The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis, depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.	The type and scale of proposed developments are such that only minor impacts to the wetlands are expected.
(2) Configuration. The buffer area shall be measured from the nearest outside edge of the ESHA (e.g., for a wetland from the landward edge of the wetland; for a stream from the landward edge of riparian vegetation or the top of the bluff).	Buffer areas have been measured from outside edge of ESHA's.
(3) Land Division. New subdivisions or boundary line adjustments shall not be allowed which will create or provide for new parcels entirely within a buffer area.	No new subdivision or boundary line adjustments are proposed.
(4) Permitted Development. Development permitted within the buffer aea shall comply at a minimum with the following standards:	

(a) Development shall be compatible with the continuance of the adjacent habitat area by maintaining the functional capacity, their ability to be self-sustaining and maintain natural species diversity.	Development is located in the only feasible locations. It is compatible with other development in the vicinity and has been thoughtfully designed to minimize impacts to ESHA's.
(b) Structures will be allowed within the buffer area only if ther is no other feasible site available on the parcel.	No other feasible site is availabe on the parcel.
(c) Development shall be sited and designed to prevent impacts which would degrade adjacent habitat areas. The determination of the site shall include consideration of drainage, access, soil type, vegetation, hydrological characteristics, elevation, topography, and distance from the natural stream channels.	Mitigation will include removal of exotic and invasive species and replacemet of native species to enhance the existing wetland.
(d) Same as 4(a)	
(e) Structures will be allowed within the buffer area only if there is not other feasible site available on the parcel. Mitigation measures, such as planting riparian vegettion, shall be required to replace the protective values of the buffer area on the parcel, at a minimum ratio of 1:1 which are lost as a result of development under this solution.	No other feasible site is availabe on the parcel.
(f) Development shall minimize the following: impervious surfaces, removal of vegetation, amount of bare soil, noise, dust, artificial light, nutrient runoff, air pollution, and human intrusion into the wetland and minimize alteration of natural landforms.	Proposed development minimizes all of the listed activities, to the greatest extent feasible.
(g). Where riparian vegetation is lost due to development, such vegetation shall be replaced at a minimum ratio of 1:1 to restore protective values of the buffer area.	No riparian vegetation will be lost.

1	
(h). Aboveground structures shall allow peak surface water flows from a 100 year flood to pass with no significant impediment.	The wetlands are created by an offsite seep and by offsite drainage.
(i). Hydraulic capacity, subsurface flow patterns , biological diversity or hydrological processes, either terrestrial or aquatic shall be protected	No impacts to hydraulic capacity, subsurface flow paterns, biological diversity, and/or biological or hydrological processes, either terrestrial or aquatic are projected.
(i). Priority for drainage conveyance from a development site shall be through the natural stream environment zones, if any exist in the development area. In the drainage system design report or development plan, the capacity of natural stream environment zones to convey runoff from the completed development shall be evaluated and integrated with the drainage system whenever possible. No structure shall interrupt the flow of ground water with in the buffer strip. Foundations shall be situated with the long axis of interrupted impermeable vertical surfaces oriented parallel to the ground water flow direction. Piers may be allowed on a case by case basis.	No structure shall interrupt the flow of ground water within a buffer strip.
(k). If findings are made that the effects of developing an ESHA buffer area may result in signifcant adverse impacts to the ESHA, mitigation measures will be required as a condition of project approval. Noise barriers, buffer areas in permanent open space, land dedicated for erosion control, and weland restoration, including offsite drainage improvements, may be required as mitigation measures for development adjacent to environmentally sensitive habitats.	Mitigation measures are outlined in the attached report and are designed to account for potential impacts to ESHA's and associated buffers.

APN: 123-290-03 BIOLOGICAL SCOPING, WETLAND DELINEATIONS, & BOTANICAL SURVEYS

# APPENDIX G: RESULTS OF U.S. ARMY CORPS OF ENGINEERS MITIGATION CALCULATION (12501-SPD.06)

1	Date: 6/18/2024	Corps File No.:	SPL-2013-N	NNN Project Manager: Martin Reimann / Sarah Bradley			adley	seasonally flooded		
_	Impact Site Name.	ZOUN PWY 1. ADD. CA	ORW Resou	ice type:	Non-tidal wetiand	10000	I and the second second	Hydrology.	seasonally II	oodeo
	Impact Cowardin or HGM type:	nverine	Impact area		0.042	acres	Impact dista	ince:	36	linear teet
		Column A			Column B	1		Column C		
		Mitigation Site Name:	Driveway cr	ossings SP04-	Mitigation Site Name:	Eastern wetla	and	Mitigation Site Name:		
		Mitigation Type:	establishme	int	Mitigation Type:	enhancement	te l	Mitigation Type:		
		ORM Resource Type:	Non-tidal we	atland	ORM Resource Type:	Non-tidal wet	land	ORM Resource Type:		
		Cowardin/HGM type:	Riparian		Cowardin/HGM type:	Rinarian		Cowardin/HGM type:		
		Hudrology:	seasonally	hebool	hudrologu:	seasonally fl	heboo	Hudrologu		
2 .	Qualitative impact mitigation	Charting setion	seasonany	100000	Phydrology:	seasonary in	dideu dideu	Clastics setio:	10	
2.8	Quantative impact-mitigation	Starting ratio.	1.0	: 1.0	Starting ratio.	1.0	1.0	Starting ratio.	1.0	: 1.0
	comparison:	Ratio adjustment:		0.0	Ratio adjustment:	0	.0	Ratio adjustment:		
		Baseline ratio:	1.00	: 1.00	Baseline ratio:	1.00 :	1.00	Baseline ratio:	1.00	: 1.00
_		PM justification:	-	see	PM justification:	10 million (1997)	see	PM justification:		see Table 1
2.b	Quantitative impact-mitigation comparison	Ratio adjustment from BAMI procedure (attached):	i ii		Ratio adjustment from BAMI	i il		Ratio adjustment from BAMI procedure (attached):		
20	Preservation (Table 2 step A)	Baseline ratio:		. 1.00	Paseline ratio:		1.00	Baseline ratio:	-	. 1.00
2.0	Preservation (Table 2, step A)	basenne ratio.		: 1.00	baseline ratio.		1.00	baseline ratio.		: 1.00
3	Preservation (Table 2, step E)	Ratio adjustment:		0.0	Ratio adjustment:			Ratio adjustment:	4	
_										
4	Mitigation site location:	Ratio adjustment:		0	Ratio adjustment:	1	0	Ratio adjustment:	1	
		PM justification: impact and m	itigation would	d be within the	PM justification: impact and r	nitigation would	be within the	PM justification:		
5	Nat loss of aquatic resource	Ratio adjustment	1	0	Ratio adjustment		0	Ratio adjustment:		
5	Net loss or aquatic resource	Natio adjustment.		•	Natio aujustment.		•	Natio adjustment.		
	surrace area.	PM justification: establishmen	t (planting wet	tland	PM justification: enhancemen	t of existing we	tland	PM justification:		
0		Petie adjustment	-		Datio adjustment			Datia adjustment:	-	
0	Type conversion:	Ratio adjustment:		0	Ratio adjustment:		•	Ratio adjustment:		
		PM justification: no difference	between impa	act and	PM justification: no conversion	n		PM justification:		
-		mitigation types	-							
7	Risk and uncertainty:	Ratio adjustment:		0.2	Ratio adjustment:		0	Ratio adjustment:		
		PM justification: + 0.1 for perm mitigation, +0.1 for planned ve	nittee-respons getation main	sible Itenance	PM justification: uncertainty f applicable	actors generall	y not	PM justification:		
8	Temporal loss:	Ratio adjustment:	100 million (1997)	1	Ratio adjustment:	31	0	Ratio adjustment:		
		PM justification: a. No known and construction of mitigation, required for full replacement o monitoring period, generally, it	delays betwee b. To accourt f functions du mitigation is	en impacts nt for time iring comprised of	PM justification: a. No planne	d delay		PM justification:		
9	Final mitigation ratio(s):	Baseline ratio from 2 a, b or c	1.00	1.00	c	1.00	1.00	Baseline ratio from 2 a, b or c:	0.00	: 1.00
		Total adjustments (2.8):		20	Total adjustments (3.8):		00	Total adjustments (3.8)	0.000	00
		Total aujustments (3-0).	0.00	.20	Total aujustments (5-6).	4.00		Total aujustilients (3-0).		
		Final ratio:	2.20	: 1.00	rinal ratio:	1.00 :	1.00	Pinal ratio:	0.00	: 1.00
		Proposed impact (total):	0.042	acres	Remaining impact:	0.00	acres	Remaining impact (acres):		acres
			36	linear feet		0	linear feet	Remaining impact (linear feet):	#VALUE!	linear feet
		to Resource type:	0		to Resource type:	0		to Resource type:	0	
		Cowardin or HGM:	riverine		Cowardin or HGM:	riverine		Cowardin or HGM:	riverine	
		1 - 2019/03/2010/03/2010/2010/2010	seasonall			seasonally		1975-978-978-979-979-979-979-979-979-979-979	seasonally	
		Hydrology:	y flooded		Hydrology:	flooded		Hydrology:	flooded	
		Required Mitigation*:	0.09	acres	Required Mitigation*:	0.00	acres	Required Mitigation:	#VALUE!	acres
			79.2	linear feet		0.0	linear feet		TVALUE!	linear feet
		of Resource type:	Non-tidal um	tland	of Resource type:	Non-tidal unt	land	of Resource type:	0	and the second
	-	Conserve as MONA	Disasian	Nailu	Considerer NOA	Disarias	iand i	Constitues Light	0	
		Cowardin or HGM:	ropanan		Cowardin or HGM:	ropanan		Cowardin or HGM:	0	
_		Hydrology:	seasonally	flooded	Hydrology:	seasonally fi	ooded	Hydrology:	0	
		Proposed Mitigation**	0.09	acres	Proposed Mitigation***	0.00	acres	Proposed Mitigation**		acres
		risposou mitigation .	70	lineas fact	risposed mitigation :	0.00	Encor foct	risposed milijarion .		linear fact
			19	innear reet		U	mear reet	1		nnear reet
		Impact Unmitigated:	0	%	Impact Unmitigated:		%	Impact Unmitigated:		%
			0.00	acres	Address and a second second		acres			acres
		Additional PM comments:			Additional PM comments:			Additional PM comments:		
			1946 11							
10	Final compensatory mitigation requirements:	Final requirement is for 0.09 a	cres (79 linea	r feet) of plant	ing Pacific reedgrass (Calama	rostis nutkaen	sis).			
		*At PM's discretion, if applica **Only enter proposed mitigati	nt's proposed on into sprea	mitigation is le	ess than checklist requirement pting applicant's lower (than re	and additional	mitigation type posal.	e(s) proposed, complete additional	columns as need	led.

Functions (Column A)	Impact site	Mitigation site			
Short- or long-term surface water storage	low	low	Adjustment: 0		
Subsurface water storage	low	low	PM Justification: impact and mitigation are within the same water body, habitat type, which means that functional gain and loss would be equal.		
Moderation of groundwater flow or discharge	moderate	moderate			
Dissipation of energy	low	low			
Cycling of nutrients	low	low			
Removal of elements and compounds	low	low			
Retention of particulates	low	low			
Export of organic carbon	moderate	moderate			
Maintenance of plant and animal communities	moderate	moderate			
Function (Column B)	Impact site	Mitigation site			
Short- or long-term surface water storage			Adjustment:		
Subsurface water storage			PM Justification:		
Moderation of groundwater flow or discharge					
Dissipation of energy					
Cycling of nutrients					
Removal of elements and compounds					
Retention of particulates					
Export of organic carbon	ψî	5			
Maintenance of plant and animal communities					
Function (Column C)	Impact site	Mitigation site			
Short- or long-term surface water storage	-		Adjustment:		
Subsurface water storage			PM Justification:		
Moderation of groundwater flow or discharge	2)				
Dissipation of energy	40	8			
Cycling of nutrients					
Removal of elements and compounds	90	5			
Retention of particulates					
Export of organic carbon					
Maintenance of plant and animal communities					
Instructions:					
1. Describe amount of functional loss (impact) and	d gain (mitigation) in ea	ch respective column. Gain	and loss can be		
2 Note: alternate lists of functions may be used					



Brunsing Associates, Inc.

# GEOTECHNICAL INVESTIGATION

# REIMANN RESIDENCE 2300 NORTH HIGHWAY 1 ALBION, CALIFORNIA

Project Number 13264.01

November 13, 2023



**Engineers and Geologists** 

## GEOTECHNICAL INVESTIGATION

## REIMANN RESIDENCE 2300 NORTH HIGHWAY 1 ALBION, CALIFORNIA

Project Number - 13264.01

prepared for

Martin Reimann P.O. Box 331 Albion, CA 95460

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November 13, 2023

ONAL C FRIK F. OLSBORC No. 1072 CERTIFIED ENGINEERING FOLOGIOS OF CA

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#### 1.0 INTRODUCTION

This report presents the results of our geotechnical investigation that Brunsing Associates, Inc. (BAI), performed for the planned Reimann residence at 2300 North Highway 1, Albion, Mendocino County, California. The project site is located on the coastal bluffs, approximately 7 miles south-southeast of the town of Mendocino. The site is shown on the Vicinity Map, Plate 1.

It is our understanding that the project will consist of a residence and detached garage, as shown on the Site Map, Plate 2. The residence will consist of a single-story structure with concrete slab-on-grade floors; the garage will consist of a two-story structure with concrete slab-on-grade floors. We understand that the upper story of the garage structure will consist of living space. Based on the plot plan provided (Sparano, 2023) the proposed residence is to be situated 50 feet northeast of the ocean blufftop and the garage is to be located approximately 180 feet west of the ocean blufftop. This report is being completed to provide an updated geologic report for Coastal Development Permit (CDP) 1-81-085 as required by the California Coastal Commission.

Our approach to providing the geotechnical and geologic information necessary to perform this investigation and evaluation utilized our knowledge of the geologic conditions in the site vicinity and our experience with similar projects. Field exploration and laboratory testing for this investigation were directed towards confirming anticipated geotechnical and geologic conditions in order to provide the basis for our conclusions and recommendations.

The scope of our geotechnical services, as outlined in our Professional Services Agreement dated May 11, 2023, consisted of reviewing previous file data including published maps and aerial photographs, engineering geologic field reconnaissance, subsurface exploration, laboratory testing on soil and bedrock samples, engineering and geologic analyses, evaluation of future effects from sea level rise, and the preparation of this report.

#### 2.0 INVESTIGATION AND LABORATORY TESTING

#### 2.1 Published Research

As part of our investigation, we reviewed published geotechnical literature, including geologic, fault, and seismic hazard maps for the site and vicinity. We also reviewed previous geologic/geotechnical reports prepared by BAI on nearby properties. Included in our review was a previously completed geologic report for the property by J.R. Bovyer, Consultant, dated September 5, 1981; The Staff Report: Consent Calendar, provided by the California Coastal Commission, North Coast District, dated October 16, 1981, which describes the Approval with Conditions of CDP # 1-81-085; and, the Plot Plan of the project area, prepared by Sparno + Mooney Architecture dated June 2, 2023. A list of selected published references reviewed for this investigation is presented in Appendix A.

#### 2.2 Reconnaissance

BAI's principal geotechnical engineer and principal engineering geologist performed a reconnaissance of the terrace and upper bluff at the property on June 8, 2023. They



photographed the site and marked the boring locations. On June 15<sup>th</sup>, our senior engineering geologist performed our subsurface exploration and a bluff reconnaissance. Drone photographs of the project site and adjacent bluffs were taken during favorable weather conditions on August 8, 2023.

#### 2.3 Aerial Photograph Studies

Our reconnaissance was augmented by studying vertical aerial photographs from the California Coastal Records Project (<u>www.californiacoastline.org</u>). We reviewed vertical, color aerial photographs of the site dated 1986 and 1993. From Google Earth, we reviewed vertical, color aerial photographs of the site dated 2023, 2021, 2019, 2018, 2016, 2012, 2010, 2009, 2006, 2005, 2003, 1998 (black and white).

In addition to reviewing vertical aerial photographs, we also obtained oblique-angle aerial photographs from the California Coastal Records Project (<u>www.californiacoastline.org</u>). We qualitatively compared oblique aerial photographs of the site from 1972, 1979, 2002, 2005, 2009, 2013 and 2019. The 1979 and 2019 photographs are presented herein as our Coastal Oblique Aerial Photographs on Plate 3. The results of our photograph studies are incorporated into Section 5.4 of this report, Bluff Retreat.

#### 2.4 Subsurface Exploration

Our subsurface exploration was conducted on June 15, 2023. The exploration consisted of drilling, logging, and sampling four exploratory test borings using a track-mounted drill rig utilizing 4.5-inch diameter solid-stem flight augers. The borings were drilled to depths of 9.5 to 16.5 feet below the ground surface. The approximate boring locations are shown on Plate 2.

Our senior engineering geologist made a descriptive log of each boring and obtained relatively undisturbed tube samples of the soil and bedrock materials encountered for visual classification and laboratory testing. Relatively undisturbed samples were obtained using 3.0-inch outside diameter modified California (CA) split-barrel sampler and a 2-inch outside diameter Standard Penetration Test sampler (SPT). The inside of the sampler barrels contained liners for retaining the soil samples. The samplers were driven by a 140-pound drop hammer falling 30 inches per blow. Blows required to drive the CA sampler were converted to SPT blow counts<sup>1</sup> for correlation with empirical test data, using a conversion factor of 0.64. Blow counts are presented on the boring logs alongside the sample locations.

Logs of the test borings showing the various soil types encountered and the depths at which samples were obtained are presented on Plates 4, 5, 6, and 7. The soils are classified in accordance with the Unified Soil Classification System outlined on Plate 8. The various descriptive properties used to describe the soils are listed on Plate 9.

<sup>&</sup>lt;sup>1</sup> SPT blow counts provide a relative measure of soil consistency and strength and are utilized in our engineering analyses.



#### 2.5 Laboratory Testing

Soil samples obtained during our subsurface exploration were transported to our laboratory and examined to confirm field classifications. Laboratory tests were performed on selected samples to estimate their pertinent geotechnical engineering characteristics. Laboratory testing consisted of moisture content, dry density, triaxial-compression, and direct shear tests. The test results are presented opposite the samples tested on the boring logs. A key to test data is provided on Plate 8. The triaxial compression tests data are presented on Plate 10. The direct shear test data is presented on Plate 11.

#### 3.0 SITE CONDITIONS

The project site is located on an elevated marine terrace west of Highway 1. The terrace was created during the Pleistocene Epoch, when glaciation caused sea level fluctuations which created a series of steps or terraces cut into the coastal bedrock surface by wave erosion. The terrace slopes generally west, toward the Pacific Ocean. The project site is bounded to the west by steep ocean bluffs; to the north and south by undeveloped space and estate properties; and to the east by Highway 1.

Based on drone reconnaissance and our review of available imagery, the bluffs are composed of steep to near vertical slopes of approximately 140 to 160 vertical feet of height. The upper 20 feet of the bluff consists of erodible material which forms slopes of 3H:1V and is vegetated with grass, shrubs, and trees. The lower bluff is composed of resistant bedrock which extends to a boulder, cobble, and sand beach below. Slope gradients in the lower bluffs ranged from 2H:1V to near vertical.

Site vegetation on the terrace consists of a dense cover of grass and weeds. Established trees were observed along the south and southwest perimeter and eastern extents of the property. Surface water was not observed at the time of our reconnaissance. Drone photographs show two groundwater seeps within the lower bluffs. A drone photograph showing the condition of the bluffs on August 8, 2023 is shown on Drone Photograph, Plate 12.

#### 4.0 SITE GEOLOGY AND SOIL CONDITIONS

The Mendocino County coastal area, east of the San Andreas Fault, is comprised of sedimentary bedrock of the Tertiary-Cretaceous Period, coastal belt of the Franciscan Complex. The Franciscan bedrock exposed within the lower 1/3 of the bluffs consists of light gray sandstone with some shale. Based on drone photographs, this bedrock appears thinly bedded with moderate fracturing and appears to dip generally to the southeast. This bedrock has been eroded in places to a resistant bench that extends west from the base of the bluff. The middle 1/3 of the bluff is composed of massively bedded and moderately fractured dark gray sandstone which has eroded to near vertical slopes.

The bedrock is overlain by Pleistocene terrace deposits of approximately 20 feet in thickness which constitute the upper bluff. These deposits have eroded to form a moderate slope which extends to the steeper bedrock bluffs below and is well vegetated. The terrace deposits are



blanketed by 2 to 4 feet of topsoil consisting of dark brown, soft sandy silts which were porous with roots. The silts appear to be of low plasticity and of low expansion potential (tendency for soil volume change with changes in moisture content). Underlying the topsoil, our exploration encountered orange-brown silty sands and clean sands (less than 5% fines) which extend to the maximum depth explored (16.5 feet). The sands are loose to dense and fine grained with few coarse sands. In general, the top two feet of these sands (underlying the topsoil) were loose, the underlying material is medium dense to dense.

No evidence of active faulting was observed in the site vicinity and the published references we reviewed did not indicate faults on or trending towards the property. The active, San Andreas Fault is located offshore, approximately 2.5 miles to the southwest.

No active landsliding or erosion were observed on the property bluffs. In general, the upper terrace deposits appear to be currently stable and well vegetated. The lower bluffs appeared generally stable with minor evidence of sloughing observed within the dark gray sandstone which forms the lower bluffs.

#### 5.0 DISCUSSION AND CONCLUSIONS

#### 5.1 General

Based on the results of our reconnaissance and subsurface exploration, we conclude that the site is geologically and geotechnically suitable for the proposed residence and garage. The main geological/geotechnical considerations affecting the proposed construction are loose and porous near-surface soils, settlement, bluff stability, bluff erosion/retreat rate, strong seismic shaking from future earthquakes and liquefaction. These considerations and their possible mitigation measures are discussed below.

#### 5.2 Weak and Porous Soils

The areas of our borings are blanketed by between 2 and 4 feet of surface soils and subsoils that are soft/loose to medium dense and porous. Foundations and slabs placed directly upon these soils could undergo damaging differential settlement. Weak soils will collapse when loaded in a saturated condition. The weak and porous soils can be removed and replaced as compacted fill according to the specifications of this report or foundation support can be derived from the underlying supporting soils.

#### 5.3 Settlement

Assuming foundations are designed and constructed in accordance with our recommendations, we estimate that the maximum post-construction settlement due to foundation loads will be less than  $\frac{3}{4}$  inch. We judge that post-construction differential settlement will be less than  $\frac{1}{2}$  inch between adjacent foundations.



#### 5.4 Bluff Retreat and Stability

Our site reconnaissance and quantitative review of aerial photographs indicate the bluffs have remained generally unchanged since 1979. Areas of potential instability observed within the 1979 oblique arial photographs show minimal evidence of continued erosion and instability and are currently well vegetated. Available imagery indicates minor sloughing and erosion within the base of the terrace deposits. Based on these observations and our experience with similar projects in the area the *average* bluff retreat (erosion) rate along the ocean bluffs is approximately 2 inches per year. At this average rate, and with a projected increase rate due to sea level rise as shown in Tables 1 and 2, the bluff edge could erode back approximately 18.8 feet over the next 75 years. Small periodic slumps within the upper bluffs should be expected during the design life of the proposed improvements.

BAI's estimated erosion rate is significantly less than the rate given in Open File Report 2007-1133 (0.2 meters, or approximately 16 inches per year) for this region. If the USGS rate were accurate, the bluff edge would have retreated approximately 27 feet over the last 20 years, which is clearly not the case.

#### 5.5 Sea Level Rise Effects on Bluff Retreat

Rapid sea-level rise of approximately 400 - 450 feet occurred between 18,000 and 8,000 years before present, according to "Rising Seas in California", Griggs, et al, 2017. Sea levels have remained relatively constant since that time. However, sea levels have started rising again. The California Coastal Commission (CCC) recently adopted the Science Update, dated November 7, 2018 to the 2015 Interpretive Guidelines for addressing Sea Level Rise in Local Coastal Programs and Coastal Development permits. The Science Update provides sea-level rise projections for the San Francisco coastal area, as follows in Table 1:



Table 1: Sea Level Rise Projections*					
			Documented	Likely	
(Medium-High Risk Aversion)			Rise	Rise	
Time Period	Sea Level Rise (Feet)	Inches	Inches	Inches	
2000	0	0			
2023**	0.6	7.4	1.8		
2030	0.8	9.6		3.4***	
2040	1.3	15.6		4.6****	
2050	1.9	22.8			
2060	2.6	31.2			
2070	3.5	42.0			
2080	4.5	54.0			
2090	5.6	67.2			
2098**	6.6	79.7			
2100	6.9	82.8			

\*California Coastal Commission, Sea Level Rise Policy Guidance, 2018

\*\*BAI interpolated

\*\*\*Assumes little or no increase to the rate of sea level rise over the next 7 years

\*\*\*\*Assumes little or no increase to the rate of sea level rise over the next 17 years

Recent sea level rise projections by the California Coastal Commission show that by 2098, the sea level will be as much as approximately 79.7 inches higher than the baseline of 2000. However, according to the National Oceanic and Atmospheric Administration (NOAA) San Francisco tide gauge, sea level rise of just 1.8 inches has occurred since 2000, rather than the 7.4 inches, projected.

Based upon historic aerial photographs and site observations, the current historic, average bluff retreat rate appears to be 2 inches per year (Table 2). The hard bedrock within the lower bluffs is very erosion resistant. Even with a 25-inch sea level rise by 2061, from 2023 elevations, the ocean wave erosion will still be resisted by hard bedrock.

	Table 2: Bluff Retreat Rate				
Years Span (years)		Cumulative Sea Level Rise (inches)*	Retreat Rate (inches per year)	Amount of Retreat (inches)	
2023-2038	15	14.2	2.0"/yr.	30	
2038-2053	15	23.6	2.5"/yr.	37.5	
2053-2068	15	39.6	3.0"/yr.	45	
2068-2083	15	57.6	3.5"/yr.	52.5	
2083-2098	15	79.7	4.0"/yr.	60	
				225'' = 18.8'	

\* Projected per California Coastal Commission (approximate)



#### 5.6 Tsunami Hazard

As typical of the Mendocino County coastal area, the site could be subject to large storm waves or tsunami waves. In February 1960, the Point Cabrillo Light House was damaged by an approximately 65 feet high storm wave (meteorological tsunami, or "meteotsunami"). No such waves are recorded at the light house from 1909, the year it was built, to 1960. The 1960 wave broke over the lighthouse building, but not the light tower. The wave picked up large, offshore rocks and threw them onto the bluffs and into the building. A tractor was needed to pull the rocks out of the building. Recently, on January 5, 2023, the lighthouse building was again hit by a storm wave which broke open the back doors and flooded the interior to a depth of about 2 feet. Given the height of the property bluffs (140 to 160 feet) potential for future large storm waves, impact or inundation from a severe storm surge or tsunami event is considered a minimal risk for the site.

#### 5.7 Seismicity and Faulting

As is typical of the Mendocino County area, the site will be subject to strong ground shaking during future, nearby, large magnitude earthquakes originating on the active San Andreas fault, or possibly other, more distant fault systems. The intensity of ground shaking at the site will depend on the distance to the causative earthquake epicenter, the magnitude of the shock, and the response characteristics of the underlying earth materials. Generally, engineered structures founded in supporting materials and designed in accordance with current building codes are well suited to resist the effects of ground shaking.

No evidence of recent faulting was observed or shown in the site vicinity on the published geologic maps that we reviewed for this investigation. Therefore, the potential for fault rupture at the site is considered low.

#### 5.8 Slope Stability Analysis

Our bluff stability analyses were performed to correspond, as a minimum, to the guidelines by California Coastal Commission, "Establishing Development Setbacks from Coastal Bluffs," Proceedings, California and the World Ocean '02. The document recommends a factor of safety greater than or equal to 1.5 for static conditions and 1.1 for seismic conditions and a horizontal seismic coefficient of 0.15.

We also followed the guidelines prepared by (1) American Society of Civil Engineers (ASCE) and Southern California Earthquake Center (SC/EC) "Recommended Procedures for Implementation of Division of Mines and Geology Special Publication 117, Guidelines for Analyzing and Mitigating Landslide Hazards in California", dated June 2002 and (2) California Geological Survey (CGS) "Guidelines for Evaluating and Mitigating Seismic Hazards in California" dated 2008.

The cross-section A-A', as shown in Appendix B, was created from Plate 2, Lidar data, our site observations and subsurface exploration. Four soil and bedrock units, with different density and strength parameters, were identified within the bluff for our stability analyses. Unit "1" is the



sandy silt to silty sand that are soft/loose, Unit "2" is the sands (little to no fines) that are medium dense to dense, Unit "3" is the weathered sandstone, and Unit "4" is the little weathered sandstone. Table 3 summarizes soil and bedrock parameters used.

	Table 3: Soil and Bedrock Parameters				
Unit	Wet Density (pcf)	Cohesion (psf)	Friction Angle ( $\phi$ )		
1	123	500	0		
2	115	0	45		
3	130	900	0		
4	135	6,800	0		

The above assigned strengths were determined from strength test results obtained from this site, adjacent sites as well as from back-analysis of the slope stability calculations. The stability of the bluff slope was analyzed using the computer program SLIDE 5.0 by Rocscience, Inc. The results of our stability analyses are presented in Appendix B.

The results of our stability analyses indicate that the bluff at section A-A' has a factor of safety less than 1.5 for static conditions and a factor of safety greater than 1.1 for pseudo-static conditions, seismic coefficient of 0.15.

The results of our stability analyses indicate that the bluff along section A-A' has the potential for instability within 13 feet from the bluff edge.

#### 5.9 Liquefaction and Densification

Liquefaction results in a loss of shear strength and potential soil volume reduction in saturated sandy, silty, silty/clayey, and also coarse gravelly soils below the groundwater table from earthquake shaking. The occurrence of this phenomenon is dependent on many factors, including the intensity and duration of ground shaking, the soil age, density, particle size distribution, and position of the groundwater table.

We have evaluated the liquefaction potential for the site using site modified peak ground acceleration. The results of our analysis indicate the site has a potential for liquefaction during a design earthquake.

Where the probability of liquefaction, factor of safety, was 1.3 or less, we performed an analysis to estimate induced vertical settlement due to liquefaction. This analysis was based on procedures by Idriss and Boulanger, 2008, with 2014 update. The results of our analysis are shown in Table 4 below. Liquefaction analysis results are presented in Appendix C.

Lateral spreading is generally caused by liquefaction of marginally stable soils underlying gently to steeply-inclined slopes. In these cases, the saturated soils move toward an unsupported face, such as an incised river channel or body of water. Based on review of our borings and nearby unsupported slope faces, we conclude that there is a minor potential for lateral spreading in the area and shown in Table 4.



BAI has performed an evaluation of earthquake induced settlement in dry sand. The analysis was based on procedures by Pradel, D.J., 1998, "Procedure to Evaluate Earthquake-Induced Settlements in Dry Sandy Soils" and are shown in Table 4.

Table 4: Liq	Table 4: Liquefaction Settlement, Densification and Lateral Displacement					
Boring Settlement (inches) Lateral Displacement Se		Settlement in Dry				
		(inches)	Sand (inches)			
B-1	0.5	5.0	3.2			
B-2	0.8	3.7	2.8			
B-3	0.1	0.4	1.7			
B-4	0	0	3.0			

To mitigate the concern of vertical settlement due to liquefaction, the planned building should be supported on drilled piers penetrating the underlying supporting soils or spread footings underlain by compacted fill. Recommendations for the foundations are presented in Section 6.0 of this report.

#### 6.0 **RECOMMENDATIONS**

#### 6.1 Bluff Edge Setbacks

Based on our aerial photograph, bluff retreat analysis and slope stability analysis, we recommend the following bluff edge setback for future improvements. Using the erosion rates presented in Table 2, the property bluffs could potentially erode back (retreat) 19 feet over the next 75 years. The 19-foot erosion setback should be increased by 13 feet determined from our slope stability analysis. This results in a setback of 32 feet, adding a factor of safety of 1.5, the total setback would be 48 feet from the bluff edge. Our bluff setback is based upon a period of 75 years, considered by the CCC to be the economic lifespan of a structure, and the projections of increased retreat rates resulting from sea level rise.

#### 6.2 Site Grading

#### 6.2.1 Clearing and Stripping

Areas to be graded should be cleared of existing vegetation, rubbish, existing structures, and debris. After clearing, surface soils that contain organic matter should be stripped. In general, the depth of required stripping will be about 2 to 4 inches; deeper stripping and grubbing may be required to remove isolated concentrations of organic matter or roots. The cleared materials should be removed from the site or stockpiled for later use in landscape areas, as appropriate.

#### 6.2.2 Structural Area Preparation

As used in this report, "Structural Areas" refers to the foundation envelopes and the areas extending five feet beyond the foundations, and to exterior concrete slabs areas and the areas extending three feet beyond their edges.



Within building areas including areas of exterior concrete slab-on-grade, existing weak soils should be removed to their maximum depth. We anticipate that this will require excavations of up to 4 feet below existing grades as determined by the by the geotechnical engineer or engineering geologist in the field at the time of construction. Deeper excavating may be necessary to remove isolated weak soils. Prior to fill placement, a geotextile stabilization fabric, such as Mirafi HP370, WinFab 370HP, or equal, should be placed over the excavation bottom in accordance with the manufacturer's specifications.

Based on the project information provided by you, it is our understanding that the residence will be constructed 4 feet below existing grade to reduce its visibility from surrounding area. It is likely that this excavation to subgrade will remove much of the weak soils, however the underlying material may be prone to settlement under construction loads. To provide adequate concrete slab-on-grade support, it is recommended that a minimum of 18 inches of material below the final subgrade be over excavated and replaced as properly compacted fill according to the specifications provided in this report. Alternatively, interior slab-on-grade floors can be structurally designed to span between foundation elements.

After the recommended excavations are complete, BAI should observe the soils exposed to confirm suitable materials are present. The exposed soils should then be scarified to about six inches deep, moisture conditioned to at least optimum moisture content and compacted to at least 90 percent relative compaction as determined by the ASTM D 1557 test procedure, latest edition. These moisture conditioning and compaction procedures should be observed by BAI to check that the soil is properly moisture conditioned and the recommended compaction is achieved.

The site soils encountered in the test borings are suitable for re-use as compacted fill. Fill material, on-site or imported, should be free of perishable matter and rocks greater than three inches in largest dimension, have an expansion index less than 30 and be approved by BAI before fill placement. Fill should be placed in thin lifts (six to eight inches depending on compaction equipment), moisture conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction, to achieve planned grades.

#### 6.2.3 Finish Grading

Finished surfaces should be graded to drain away from structures and foundations. A minimum surface drainage gradient of three percent is recommended.

Subgrade soil should be finished true to line and grade to present a smooth, firm, and unyielding surface. Finished surfaces should be maintained moist and free of shrinkage cracks until covered by permanent construction. Fill surfaces allowed to dry out and crack should be re-moisture conditioned to at least optimum moisture content and re-compacted prior to pavement installation.



#### 6.3 Foundation Support

#### 6.3.1 Drilled Piers

The structures can be supported on a system of drilled cast in place concrete piers interconnected with grade beams. Drilled piers should be at least 12 inches in diameter and should be embedded a minimum of five feet into supporting soils, as determined by BAI. The supporting soil was encountered at approximately 5 to 8 feet below existing ground surface. The drilled piers should be at least 10 to 13 feet in length. Pier length and diameter should be determined by a structural engineer based on our recommendations. Bedrock was not encountered within our borings; however, bedrock is anticipated to be approximately 20 feet below the existing ground surface. If one pier penetrates bedrock, all the piers should penetrate bedrock. A perimeter drain should be constructed as shown on the attached Plate 13.

Pier spacing should be no closer than 3 pier diameters, center to center. The drilled piers should be designed to gain support from skin friction. A skin friction value of 300 pounds per square foot (psf) of shaft area may be used in the supporting soil, for dead loads plus live loads. For total downward loads due to wind or seismic forces, the pier capacity can be increased by one third. Uplift frictional capacity for piers should be limited to 2/3 of the allowable downward capacity. When final pier depths have been achieved, as determined by BAI, the bottoms of the pier holes should be cleaned of loose materials. BAI should observe the drilling and final clean out of the pier holes, prior to the placement of reinforcing steel.

Resistance to lateral loads can be obtained using passive earth pressure against the face of the foundations. An allowable passive pressure of 250 psf (rectangular distribution) can be used within the supporting soil. Passive pressure should be neglected within the upper 5 feet of existing ground surface. Passive pressure can be projected over two pier diameters.

If groundwater is encountered during construction, the pier holes should be dewatered prior to placement of reinforcing steel and concrete. Alternatively, if more than six inches of groundwater has entered the pier hole, concrete can be tremied into place with an adequate head to displace water or slurry. Concrete should not be placed by freefall in such a manner as to hit the sidewalls of the excavation.

Caving soils may be encountered. The driller should be prepared to case pier holes where caving occurs. If used, the casing would need to be withdrawn from the pier holes as the pier concrete is placed.

#### 6.3.2 Spread Footings

The proposed structures can be supported on reinforced concrete footings in compacted fill. Footings can be designed using an allowable soil bearing pressure of 2,500 pounds per square foot (psf) for dead plus live loads. A 33 percent increase in bearing pressure is allowable for total loads, including wind or seismic loads. Footing elements within compacted fill pad should be founded at least 18 inches below lowest adjacent finish grade with at least 24-inches of



compacted fill below the footing. Wall footings should be no less than 12 and 15 inches wide for one and two-story construction, respectively.

No subsurface structures (such as subsurface walls, tanks, other foundations, or utility lines) should extend below the footings, or within a zone defined by a 45-degree angle projected downward from the outside, bottom edges of the footings. Completed foundation excavations should be observed by a representative from BAI prior to the placement of reinforcing steel. A perimeter drain should be constructed as shown on the attached Plate 13.

Resistance to lateral loads can be obtained using passive earth pressure against the face of the foundations. An allowable passive pressure of 200 psf per foot of depth below subgrade and frictional resistance of 0.30 times net vertical dead load, are appropriate for footing elements poured neat against supporting natural and approved engineered fill soils, if required. Passive pressure should be neglected within the upper 6 inches.

#### 6.4 Seismic Design Criteria

The structure should be designed and/or constructed to resist the effects of strong ground shaking (on the order of Modified Mercalli Intensity IX) in accordance with current building codes. The California Building Code (CBC) 2022 edition indicates that the site classification for the property is Site Class F, due to the potential for liquefaction. BAI is anticipating that the fundamental period of vibration will be equal to or less than 0.5 seconds, for which a site-response analysis is not required in accordance with ASCE 7-16. However, if the structural engineer determines that the fundamental period of vibration is greater than 0.5 seconds, BAI will need to re-evaluate the site and may need to perform a site response analysis. Based on a site response analysis not being required, BAI is using Site Class D for design. Accordingly, CBC indicates that the following seismic design parameters are appropriate for the site:

Table 5: Seismic Design Parameters						
Site Class	=	D				
Mapped Spectral Response Acceleration at 0.2 sec	Ss =	2.035g				
Mapped Spectral Response Acceleration at 1.0 sec	$S_1 =$	0.841g				
Modified Spectral Response Acceleration at 0.2 sec	$S_{MS} =$	2.035g				
Modified Spectral Response Acceleration at 1.0 sec	$S_{M1} =$	1.430g				
Design Spectral Response Acceleration at 0.2 sec	$S_{DS} =$	1.357g				
Design Spectral Response Acceleration at 1.0 sec	$S_{D1} =$	0.953g				
Site Coefficient	$F_a =$	1.0				
Site Coefficient	$F_v =$	1.7				
Long-period transition period	$T_L =$	12				
Seismic Design Category	=	Е				

#### 6.5 Concrete Slab Support

If a structural-supported concrete slab is used (i.e., the slab is supported by and able to span between, interconnecting foundation elements without gaining support from underlying soil), then over-excavation of subgrade soils is not required. However, topsoil containing organics



should be removed beneath the planned slab (as much as 12 inches in depth below existing ground surface).

Concrete slabs on grade not supported by foundation elements should be supported on properly compacted fill placed in accordance with our recommendations previously presented in 6.2 Site Grading. The compacted fill can be crushed drain rock or native soils placed in thin lifts and in a manner to prevent segregation; moisture conditioned to near optimum moisture content and compacted to 90 percent relative compaction to provide a firm unyielding surface. The drain rock should not be loose but vibrated in place to ensure a tight inter-locking of the rocks.

Regardless of means of support, interior concrete slab floors should be underlain by at least four inches of clean, free draining <sup>3</sup>/<sub>4</sub> inch crushed rock, to act as a capillary moisture break. An underslab drain should be constructed, as shown on the attached Plate 13. If a soil-supported slab is used, shrinkage cracks within the subgrade soils should be closed by wetting before crushed rock placement.

Where migration of moisture through the floor slab would be detrimental to its intended use, the installation of a vapor barrier membrane should be considered. The moisture/vapor barrier geomembrane, placed upon the gravel layer, should be at least 15 mils thick (i.e., Stego ® Wrap Vapor Barrier, or equivalent), installed in accordance with the manufacturer's specifications to prevent moisture migration through the seams. With a 15-mil minimum thickness membrane, the 2 inches of wetted sand typically placed upon the membrane may be omitted. Construction of moisture/vapor barrier does not guarantee the prevention of moisture moving through the floor slab. However, this provision should substantially reduce the potential for moisture-vapor problems on the floors and/or future mold and mildew problems.

#### 6.6 Retaining Walls

If retaining walls are utilized, they should be provided with permanent back drainage to prevent buildup of hydrostatic pressure or designed to resist hydrostatic pressures. Drainage and backfill details are presented on Plate 14. In areas where movement of moisture vapor through the wall would be detrimental to its intended use, installation of a vapor retarder membrane should be considered. Construction of vapor retarders does not guarantee the prevention of moisture moving through concrete walls. Quality, placement, and compaction requirements for backfill behind subsurface walls are the same as previously presented for fill. Light compaction equipment should be used near the wall to avoid overstressing the walls. Retaining walls should be designed to resist the lateral earth pressures presented on Plate 15.

In addition to static loads, the retaining walls should also be designed to resist potential seismic loads, in accordance with CBC requirements. For seismic loads, a pressure increment equivalent to a triangular distribution is recommended, varying from 0 (zero) pounds per square foot (psf) at the top of the retaining portion of the wall to 25H psf at the bottom of the retaining portion, where "H" is the height of the retaining portion (resultant dynamic thrust act at 0.33H above the base of the wall).



#### 6.7 Site Drainage

Because surface and/or subsurface water is often the cause of foundation or slope stability problems, care should be taken to intercept and divert concentrated surface flows and subsurface seepage away from the building foundations. Drainage across the lot should be by sheet-flow. Surface grades should maintain a recommended three percent gradient away from building foundations. Under slab drainage and foundation drains should be provided as shown on Plate 13.

#### 7.0 ADDITIONAL SERVICES

BAI should review and provide consultation during preparation of final development plans. Prior to construction, BAI should review the final grading plans, and soil related specifications for conformance with our recommendations. During construction, BAI should be retained to stake the bluff edge to ensure the proper setback. During construction, BAI should be retained to provide periodic observations, together with field and laboratory testing, during site preparation, placement and compaction of fills, if required. Our reviews and tests would allow us to verify conformance of the work to project guidelines, determine that soil conditions are as anticipated, and to modify our recommendations, if necessary.

#### 8.0 LIMITATIONS

This geotechnical investigation was performed in accordance with the usual and current standards of the profession, as they relate to this and similar localities. No other warranty, expressed or implied, is provided as to the conclusions and professional advice presented in this report. Our conclusions are based upon reasonable geological and engineering interpretation of available data.

The samples taken and tested, and the observations made, are considered to be representative of the site; however, soil and geologic conditions may vary significantly between test borings and across the site. As in most projects, conditions revealed during construction excavation may be at variance with preliminary findings. If this occurs, the changed conditions must be evaluated by BAI, and revised recommendations be provided as required.

This report is issued with the understanding that it is the responsibility of the Owner, or his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of all other design professionals for the project, and incorporated into the plans, and that the Contractor and Subcontractors implement such recommendations in the field. The safety of others is the responsibility of the Contractor. The Contractor should notify the owner and BAI if he/she considers any of the recommended actions presented herein to be unsafe or otherwise impractical.

Changes in the condition of a site can occur with the passage of time, whether they are due to natural events or to human activities on this, or adjacent sites. In addition, changes in applicable or appropriate codes and standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, this report may become invalidated wholly or partially



by changes outside of our control. Therefore, this report is subject to review and revision as changed conditions are identified.

The recommendations contained in this report are based on certain specific project information regarding type of construction and current improvement locations, which have been made available to us. If conceptual changes are undertaken during final project design, we should be allowed to review them in light of this report to determine if our recommendations are still applicable.



# PLATES



















10000	Latitude/Longitude esti * See Soil Classificatio ** Equivalent "Standard ** Elevations interpolate	imated from Google Earth. n Chart & Key to Test Data Penetration" Blow Counts. ed from Plate 2.				Scale: 1'' = 3'
WILL SALES	Bri	unsing Associates. Inc.	Job No.:	13264.01	LOG OF BORING B-4	PLATE
	546 San	8 Skylane Blvd., Suite 201 ta Rosa, California 95403	Appr.:	EEO	REIMANN RESIDENCE 2300 North Highway 1 Albion Colifornia	7
Child Contraction of the Contrac	Tel:	Tel: (707) 528-6108	Date:	11/13/23	Albion, California	SHEET 1 of 1

					BOLS	TYPICAL	
cs)				GRAPHIC	LETTER	DESCRIPTIONS	
		GRAVELS AND	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	COARSE- GRAINED SOILS	GRAVELLY SOILS	(Less than 5% fines)		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		MORE THAN 50% OF COARSE	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	
sn) v		RETAINED ON NO. 4 SIEVE	(Greater than 12% fines)		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	
STEN	MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
ATION SY		SANDY SOILS	(Less than 5% fines)		SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		50% OR MORE OF COARSE FRACTION PASSING	SANDS WITH FINES		SM	SILTY SANDS, SAND-SILT MIXTURES	
SIFIC		SIEVE	(Greater than 12% fines)		SC	CLAYEY SANDS, SAND-CLAY MIXTURES	
OIL CLAS	FINE- GRAINED SOILS				ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
		AND	LIQUID LIMIT LESS THAN 50		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
ED S					OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
UNIF	MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE				мн	INORGANIC SILT, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
		SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		СН	INORGANIC CLAYS OF HIGH PLASTICITY	
					он	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
	HI	GHLY ORGANIC SC	DILS		РТ	PEAT, HUMOUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	
			KEY TO TES	ST DA	TA		
LL ·	- Liquid Limit	Consol - Consolida	ation Shear S	trength.	nsfa	Confining Pressure, psf	
PL	- Plasticity Index	EI - Expansion Ind	ex	тх	1564	4 (1440) - Unconsolidated Undrained Triaxial	
1	Sample Retained	SA - Sieve Analys	is	Тx	TxCU 1564 (1440) - Consolidated Undrained Triaxial		
$\square$	Sample Recovered,	Not Retained		DS 2020 (1440) - Consolidated Drained Direct Shear			
$\boxtimes$	Bulk Sample			F١	/S 520	- Field Vane Shear	
Ø	Sample Not Recove	ered		UC	C 1500	0 - Unconfined Compression	
CA	- California Modified S	Split Barrel Sampler 3.0	0-inch O.D.	PF	P 1500	0 - Field Pocket Penetrometer	
CM	- California Modified	Split Barrel Sampler 2.	b-inch O.D.	Sa	ıt	- Sample saturated prior to test	
SPT - California Split Barrel Sampler 2.0-inch O.D.							
SH ·	- Shelby Tube		$\overline{\bigtriangledown}$ Initial Groundwater Level Reading				
RC	- HOCK Coring	in and			<u> </u>	Second Groundwater Level Reading	
RQD	<ul> <li>Percent Core Recov</li> <li>Rock Quality Design</li> </ul>	vered nation (length of core p	ieces >= 4-inches / co	re length	)		
	, , ,	· · · · · · · · · · · · · · · · · · ·					
AND.	Brunsing Associ	ates, Inc.	13264.01 SOIL	CLASSIE	FICATIO	ON CHART & KEY TO TEST DATA PLAT	
0	5468 Skylane Blvd.,	Suite 201	EED		REIM/	ANN RESIDENCE	
6.4	Santa Rosa, Californ	nia 95403	100		2300 All	bion. California	
A A A	Tel: (707) 528-6108	Date:	11/13/23		7 11		

	Relative Density		Standard Penetration Test Blow Count (blows per foot)					
Very loose Loose Medium dense Dense Very dense			4 or less 5 to 10 11 to 30 31 to 50 More than 50					
	CON	ISISTENCY OF	FINE-GRAINED SOILS					
Consist	Consistency		tion Procedure	Approximate Shear Strength (psf)           Less than 250 250 to 500 500 to 1000 1000 to 2000 2000 to 4000 More than 4000				
Very soft Soft Medium stiff Penet Stiff Readily ir Very stiff Hard		Easily penetrated Easily penetrated s rated several inches ndented by thumb, b Readily inde indented with d	several inches with fist everal inches with thumb s by thumb with moderate effort out penetrated only with great effort nted by thumb nail ifficulty by thumb nail					
		NATURAL M	DISTURE CONTENT					
Dry	No noticeable mois moisture content*	sture content. Req for compaction.	uires considerable moisture to obta	in optimum				
Damp	Contains some mo	oisture, but is on th	e dry side of optimum.					
Moist	Near optimum moi	sture content for c	ompaction.					
Wet	Requires drying to	obtain optimum m	oisture content for compaction.					
Saturated	Near or below the void spaces filled	water table, from c with water.	apillarity, or from perched or ponde	d water. All				
* Optimum mois	sture content as determ	ined in accordance w	ith ASTM Test Method D1557, latest edi	tion.				
Where laborato material proper	ry test data are not ava ies; the classifications	ilable, the above field may require modifica	l classifications provide a general indicat tion based upon laboratory tests.	ion of				
Brun 5468 S Santa Tel: (7	sing Associates, Inc. Skylane Blvd., Suite 201 Rosa, California 95403 (07) 528-6108	Job No.: 13264.01 Appr.: <b>EEO</b> Date: 11/13/23	SOIL DESCRIPTIVE PROP REIMANN RESIDENC 2300 North Highway 1 Albion, California	E <b>RTIES</b> E	plate 9			

#### **RELATIVE DENSITY OF COARSE-GRAINED SOILS**


Sample Source	Classification	Confining Pressure (psf)	Ultimate Strength (psf)	Strain (%)	Dry Density (pcf)	Moisture Content (%)
B-1 at 6 ft	LIGHT ORANGE-BROWN SILTY SAND (SM)	1152	2559	5.2	107	15.1
🕱 B-2 at 13 ft	LIGHT ORANGE-BROWN SILTY SAND (SM)	2160	5161	4.4	100	11.8
▲ B-4 at 4.5 ft	DARK BROWN SILTY SAND (SM)	864	2051	9.7	103	18.5





.

NORMAL PRESSURE, psf

S	ample Source	Classification		$\gamma_{d}$	MC%	С	$\phi$ (degree)
	D1-1 1004	LICHT ODANICE DROWN SAND (CD)	Initial	104	4.3	0	40
	B-1 at 16.0 ft	LIGHT ORANGE-BROWN SAND (SP)	After	103	18.8	U	48

	Brunsing Associates, Inc.	Job No.:	13264.01	DIRECT SHEAR TEST RESULTS	PLATE
A	5468 Skylane Blvd., Suite 201 Santa Rosa, California 95403	Appr.:	EEO	2300 North Highway 1	11
	Tel: (707) 528-6108	Date:	11/13/23	Albion, California	



**REFERENCE:** 

Photograph taken on-site August 8, 2023.

Brunsing Associates, Inc. 5468 Skylane Blvd., Suite 201 Santa Rosa, California 95403 Tel: (707) 528-6108



**REIMANN RESIDENCE** 2300 North Highway 1 Albion, California





## NOTES:

- 1. Drain rock should be clean, free-draining 3/4-inch crushed rock.
- 2. Perimeter foundation drain rock should be wrapped in a non-woven geotextile filter fabric (Mirafi 140N or equivalent) or Class 2 permeable material, without filter fabric, per Caltrans standard specifications, latest edition.
- 3. Pipe should be SDR 35 or equivalent, perforations placed down, sloped at least 1 percent to gravity outlet.
- 4. A clean-out pipe with cap should be installed at the up-slope end of the pipe, pipe elbows should be 45 degrees or less (for "snake" access).
- 5. Vapor retarder should be at least 15-mils thick and installed in accordance with the manufacturer's specifications.



Brunsing Associates, Inc. 5468 Skylane Blvd., Suite 201 Santa Rosa, California 95403 Tel: (707) 528-6108 Job No.: 13264.01 Appr.: **EEO** Date: 11/13/23 PERIMETER FOUNDATION AND UNDER SLAB DRAINAGE DETAILS REIMANN RESIDENCE 2300 North Highway 1 Albion, California

plate 13



RETAINING WALL DRAINAGE DETAIL (Not to Scale)

### NOTES:

- (1) Drain rock should be clean, free-draining 3/4-inch crushed rock and should be wrapped in a non-woven geotextile filter fabric (Mirafi 140N or equivalent), or Class 2 permeable material, without filter fabric, per Caltrans standard specifications, latest edition.
- (2) Pipe should be SDR 35 or equivalent, placed with perforations down, and sloped at 1 percent to drain to gravity outlet.
- (3) A clean-out pipe with cap should be installed at the up-slope end of perforated pipe, and pipe elbows should be 45 degrees or less (for "snake" access).



Brunsing Associates, Inc. 5468 Skylane Blvd., Suite 201 Santa Rosa, California 95403 Tel: (707) 528-6108 Job No.: 13264.01 Appr.: **EEO** Date: 11/13/23 RETAINING WALL DRAINAGE DETAIL REIMANN RESIDENCE 2300 North Highway 1 Albion, California

PLATE



## NOTES:

13264.01 GINT.GPJ,

SSURE2,

6 RETAINING

(1) If the wall at the surface of the backfill cannot move more than about 0.1 percent of its' height, at-rest soil pressures should be used.

- (2) If the wall is drained the above hydrostatic pressure does not have to be used. See Plate 14 for drainage and backfill details.
- (3) The above pressures should be used where backfill slope is flatter than 3 horizontal to 1 vertical (3H:1V). Where backfill slope is between 3H:1V and 1.5H:1V, use active pressure of 55H psf and at-rest pressure of 87H psf, respectively.
- (4) For additional design seismic pressures see the Retaining Walls section of this report.



### APPENDIX A

### References

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## APPENDIX B

Slope Stability Analysis









11/13/2023 10:29:14 AM save date Sections dwg 11/13/2023 10:29:59 AM plot date



192,168,2,10

11/13/2023 10:29:14 AM save date Sections.dwg 11/13/2023 10:29:40 AM plot date

# APPENDIX C

8

Liquefaction Analysis



Project	Reimann				
Project #	13264.01				
Date	11/13/2023				
Bonng	B-1				
Input Parameter	8.				
Feak Ground Ac	cel(g) =			1.047	
Earth quake Mas	mitude, M =			7.9	
Water Table De	pth (m) =	3	0	10.00	(ft)
Average y Abov	e Water Tuble (k29/m3) =	17	.4	111.0	(11/0 <sup>3</sup> )
Average y Below	w Water Table (kN/m <sup>2</sup> ) =	20	4	130.0	(11/ft <sup>3</sup> )
Borchole Diame	ter (mm) =	114	.30	4.5	(in)
Requires Correc	tion for Sample Liners (YES(NO))			no	
RodLer	ighs Assumed Equid to the Depth Plus	1	5	m (for the	above ground extension)
Gravilty Acceler	ration (m/sec <sup>2</sup> )	9.	81		
Height of Expos	ed Face (m)		5	20	(ft)
Renna Thatan	From Ennored Ence (m)	2	1	62	(0)

Ke =	0.5
Nc =	19.2

#### Liquefaction Potential

SPT Sample Number	Depth (m)	Depth (ft)	Laye: Thickness (m)	Midpoint of Layer (m)	Measured N	Soil Type (USCS)	Flag "nip"	SadUnsat	Fines Content (%)	Energy Ratio. ER (%)	CE	CB	CR	G	$N_{50}$	o <sub>e</sub> (kPa)	o <sub>re</sub> (kPa)	Cu	$(N_1)_{\ell 0}$	∆N for Fines Content	(N1)50-cs	Stress Reduct, Coeff, r <sub>d</sub>	CSR	MSFmax	MSF for Sand	K.a for Sand	CRR for M=7.5 & ⊂ <sub>ve</sub> ≒1atin	CRR	Factor of Safety
1	0.76	2.50	0.76	0.38	15	ML		Ŭ.	50	30	1.33	1	0.75	1.05	15.0	13	13	1.70	25.50	56	31.11	1.00	0.682	2.1	0.87	1.10	0.564	NA	11 A
2	1.52	5.00	0.76	1.14	4	SM		0	35	80	1.33	1	0.8	1.00	4.3	27	27	1.70	7.25	5.5	12.76	1 00	0.679	1.3	0.97	1 10	0.138	NA	11 A
3	2.59	8 50	1.07	2.06	6	SM		0	35	80	1.33	1	0.85	1.00	6.8	45	45	1.47	10.02	5.5	15.52	0.99	0.674	13	0.96	1 09	0.161	N.A.	NA
4	3.05	10.00	0.46	2.82	15	SP		0	0	80	1.33	1	0.85	1.00	17.0	53	53	1.31	22.28	0.0	22.28	0.99	0.672	1.6	0.93	1 09	0.237	N.A.	NA
5	3.96	13 00	0.91	3.51	20	SP		1	0 0 11	80	1.33	1	28.0	1.00	22.7	66	58	1.24	28.03	0.0	28.03	0.98	0.772	1.9	0.89	1 10	0.385	0.38	0.49
6	5.03	16.50	1.07	4 50	35	SP		1	2	80	1.33	1	0.95	1.00	44.3	35	66	1.12	49.60	0.0	49.60	0.97	0.857	22	0.85	1.10	2 000	1.87	2.00
7	6.10	20.00	1.07	5.56	35	SP		1	2	68	1.33	1	0.95	1.00	44.3	106	76	1.08	47.84	0.0	47.84	0.96	0.914	2.2	0.85	1.09	2.000	1.84	2.00
3	9.14	30.00	3.05	7.62	50	bedrock		1	35	80	1.33	1	1	1.00	667	146	36	1.04	69.51	5.5	75.02	0.93	1.076	2.2	0.85	1.05	2.000	1.78	1.65

#### Liquefaction Induced Settlement and Lateral Spreading

Dry Sand Settlement

...

													2012425						
		Limiting		Maximum				Vertical					Shear						Dry Sand
Depth		Shear	Peranet	Shear		ALDI,	ALDI;	Reconsol				Average	Modulus						Settlement
(m)	Depth (ft)	Strain Yim	er Fa	Strain ymar	ΔH, (m)	(m)	(in)	Strain &	4S, (m)	45, (in)	Tave	Stress (p)	(Gmax)	a	ь	y (%)	515 (%)	Sec (%)	(in)
											(tsf)	(tsf)	(tsf)						
0.76	2.50	0.040	-0.164	0.000	0.76	0.000	0.0	0.000	0.000	0.00	0.095	0.09	427.6	0 128	26699	0.94	0.555	0 620	0.4
1.52	5.00	0.350	0.838	0.000	0.76	0.000	0.0	0.000	0.005	0.00	0.188	0.19	449.3	0.131	17615	1.00	1.715	1.915	1.1
2.59	8.50	0.260	0.733	0.000	107	0.000	0.0	0.000	0.000	0.00	0.318	0.31	625.3	0.135	12812	1.00	1.355	1.514	1.3
3.05	10.00	0.123	0.392	0.000	0.46	0.000	0.0	0.000	0.000	0.00	0.373	0.37	765.1	0.135	11621	1.00	0.878	0.981	0.4
3.96	13.00	0.061	0.041	0.061	0.91	0.055	2.2	0.015	0.012	0.46	0.463	0.48	941.8	0.143	9928.7	0.00	0.000	0.000	0.0
5.03	16.50	0.000	-1.557	0.000	1 07	0.000	0.0	0.000	0.000	0.00	0.590	0.61	1283.3	0.148	8605.4	0.00	0.000	0.000	0.0
6 10	20.00	0.001	-1.415	0.000	107	0.000	0.0	0.000	0.000	0.00	0.722	0.74	1395.9	0.153	7667.3	0.00	0.000	0.000	0.0
9.14	30.00	0.000	-3.744	0.000	3.05	0.000	00	0.000	0.000	0.00	0.968	1.11	1986.2	0 167	6011.5	0.00	0 000	0.000	0.0
					LDI=	0.12	4.9	S=	0.012	0.46								Sm	3.15
						(m)	(in)		(m)	(in)									(in)

(m) Dry Settlement (1) Flag m<sup>2</sup>) – based on laboratory testing of fine content, plasticity index, liquid limits and potential intact moisture content. "n|p" - no liquifacton potential



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Project Project #	Bermann 13264-01				
Date:	1/13/2023				
Boring.	B-2				
Input Parameters					
Peak Ground Accel (g) =			1.047		
Earthquake Magnitude, M =			73		
Water Table Depth (m) =		3.0	10.00	(ft)	
Average v Above Water Table (	$(M/m^3) =$	17.3	110.0	$(16/\Omega^2)$	
Average yBelow Water Table (	(N/m <sup>3</sup> ) =	20.4	130.0	(15/ft <sup>3</sup> )	
Borehole Diameter (mm) =		114.30	4.5	(in)	
Requires Correction for Sample	Liners (YES/NO)		no		
Rod Lengths Assumed i	Equal to the Depth Plus	1.5	m (for the	above ground extension)	
Gravilty Acceleration (m/sec2)		9.81			
Height of Exposed Face (m)		ó	20	(ft)	
Boring Distance from Exposed ?	Face (m)	34	113	(ft)	

#### Liquefaction Potential

Eo = 0.5 No = 19.2

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										the engy																1.227			
SPT			Layer	Midpoint	Measured		1-	WSII	Fines	Batio,										4N for		Stress					CRR for		
Sample	Depth	Depth	Thickness	of Layer		Soil Type	Flag	10	Content	ER						0/4	010			101002		Reduct,			MSP for	Tre.	M=758		Factor of
Numbe	: (m)	(ft)	(m)	(m)	ы	(USCS)	"nlp"	Sau	(%)	(%)	$\mathbb{C}_{E}$	$C_{\rm B}$	C.R.	C;	N60	(kFa)	(k.Pa)	CH	$(N_1)_{00}$	Content	$(\mathbb{N}_1)_{00 \ll 1}$	Coeff. ta	CSR	$\mathrm{MSF}_{\mathrm{max}}$	Sand	for Sand	$\sigma_{w}{=}1atm$	CRR	Safety
1	1.07	3.50	1.07	0.53	5	ML		0.	50	80	1.33	1	0.75	1.00	5.0	18	18	1.70	8.50	5.6	14.11	1.00	0.681	13	0.96	1.10	0.149	N.A.	MA
2	2.44	3.00	1.37	1.75	13	SM		0	35	80	1.33	1	0.9	1.00	13.9	42	42	1.42	19.65	5.5	25 16	0.99	0.675	1.7	0.91	1.10	0.294	N.A.	NM
3	3.05	10.00	0.61	2.74	13	SM		0	35	80	1.33	1	0.85	1.00	14.7	53	53	1.30	19.15	5.5	24.66	0.99	0.572	1.7	0.91	1.10	0.282	N.A.	MA
4	4.11	13,50	1.07	3.58	15	SM		1	30	80	1.33	- 91.10C	0.35	1.00	17.0	69	58	1.24	21.05	5.4	26.41	89.0	0.786	1.8	0.90	1.02	0.328	0.3228	0.41
5	4 57	15 00	0.46	4 34	19	SM		1	30	80	1.33	1	0.95	1 00	24.1	83	68	. 1.15	27.60	5.4	32,96	0.98	0.811	22	0.85	1,09	0.754	0.70	0.86
6	6.10	20.00	1.52	5.33	22	SM		1	30	80	1 33	1	0.95	1.00	27.9	102	72	1.11	31.02	54	36 38	0.96	0.926	2.2	0.85	1 09	1.505	1.40	1.51
7	914	30.00	3.05	7 62	30	bedrock		1	30	20	1.33	1	1	1.00	40.0	147	87	1.04	41.64	5.4	47.00	0.93	1073	22	0.85	1.04	2.000	1.77	1.65

#### Liquefaction Induced Settlement and Lateral Spreading

#### Dry Sand Settlement

	Depth		Limiting Shear	Paramet	Mammum Shear		ALDI,	۵LDI,	Reconsol				Average	Shear Modulus						Dry San d Settlement
	(m)	Depth (ft)	Strain Yim	er F <sub>a</sub>	Strain ymar	$\Delta H_{i}(m)$	(m)	(in)	Strain $\boldsymbol{\epsilon}_{v}$	$\Delta S_{i}(m)$	$\Delta S_i$ (in)	Tavg (tsf)	Stress (p) (tSf)	(Gmax) (tsf)	A	b	y (%)	ε <sub>15</sub> (%)	S <sub>NC</sub> (%)	(in)
	1.07	3.50	0.303	0 789	0.000	107	0.000	0.0	0.000	0.000	0.00	0.131	0.13	337 0	0 129	21937	1.00	1.519	1.697	14
	2.44	8.00	0.087	0.222	0.000	1 37	0.000	0.0	0.000	0.000	0.00	0.297	0.29	709.4	0 135	13359	1.00	0.759	0.848	0.9
	3.05	10.00	0.093	0.253	0.000	0.61	0.000	0.0	0.000	0.000	0.00	0.370	0.37	787.8	0.138	11685	1 00	0.778	0.869	0.4
	4.11	13.50	0.075	0 145	0.075	1.07	0.080	3.1	0.017	0.018	0.71	0.479	0.50	936 5	0.143	9759.3	0.00	0.000	0.000	0.0
	4 57	15.00	0.030	-0.291	0.030	0.46	0.014	0.5	0.005	0.002	0.10	0.574	0.55	1062.9	0.145	9161.4	0.00	0.000	0.000	0.0
	6.10	20.00	0.017	-0.536	0.000	1.52	0.000	0.0	0.000	0.000	0.00	0.700	0.73	1268.4	0.153	7709	0.00	0.000	0.000	0.0
	9.14	30.00	0.001	-1.348	0.000	3.05	0.000	0.0	0.000	0.000	0.00	0.972	1.10	1691.9	0 167	6044.3	0.00	0.000	0.000	0.0
						LD =	0.09	3.7	S=	0.020	0.80								S=	276
							(m)	(in)		(m)	(in)									(in)
Liquefaction Potential																				



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13264.01

Project Retni ann Project # 13264.01 Date 11/13/2023					
Benng B-3					
In put Parameters					
Peak Ground Accel (g) =		1.047			
Earthquake Magnitude, M =		7.9			
Water Table Depth (m) =	3.0	10.00	(ft)		
Average y Above Water Table (kN/m3) =	19.6	1250	(15/ft <sup>-3</sup> )	$K_0 =$	0.5
Average y Below Water Table (kN/m3) =	20.4	130.0	(15/ft <sup>3</sup> )	Nc =	19.2
Borehole Diameter (mm) =	114.30	4.5	(in)		
Requires Correction for Sample Liners (YES/NO):		0.0			
Rod Lengths Assumed Equal to the Depth Plus	15	m (for the	above ground extension)		
Gravity Acceleration (m/sec2)	9.81				
Height of Exposed Face (m)	6	20	(ft)		
Bonng Distance from Exposed Face (m)	30	100	(fL)		

#### Liquefaction Potential

SPT Sample Number	Depth (m)	Depth (ft)	Layet Thickness (m)	Midpoint of Layer (m)	Measured N	l Soil Type (USCS)	Flag "nlp"	SavUnsat	Fines Content (%)	Energy Ratio, ER (%)	Cg	CB	CR	Cs	Na	C <sub>ve</sub> (kPa)	o <sub>w</sub> (kPa)	$C_{B}$	(N1)co	AN for Fines Content	(N1)60-2	Stress Reduct, Coeff, 14	OSF.	M3F <sub>max</sub>	MSF for Sand	K., for Sand	CRR for M=75≵ ⊘ <sub>et</sub> ≒latm	CRR.	Factor of Safety
1	1.22	4.00	122	0.61	8	ML		0	50	30	1.33	1	9.75	1.00	3.0	24	24	1 70	13.60	5.6	19.21	1.00	0.680	1.5	0.94	1.10	0.197	NA.	NA
2	2.44	8.00	1.22	1.83	30	SM		0	35	80	1.33	1	0.8	1.00	32.0	48	48	1.22	39.16	5.5	44.67	0.99	0.675	2.2	0.85	1.10	2.000	N.A.	N.A.
3	3.05	10.00	0.61	2.74	17	SM		0	35	80	1.33	1	0.85	1.00	193	60	60	1.21	23 40	5.5	28.90	0.99	0.672	1.9	0 88	1.10	0.424	NA	N.A.
4	3.20	10.50	0.15	3.12	17	SM		1	30	- 80	1.35	1	0.85	1.00	19.3	87	66	1.17	22 64	5.4	28.00	0.99	0.687	1.9	0.89	1.08	0.384	0 36795	0.54
5	4.57	15.00	1.37	3.89	21	SM		1	30	80	1.33	1	0.95	1.00	26 6	83	68	1.14	30.26	5.4	35.63	0.98	0.810	2.2	0.85	1 10	1.267	1.18	1.46
6	610	20.00	1.52	5.33	23	SM		1	30	80	1.33	1	0.95	1.00	29.1	112	82	1.07	31.14	5.4	36.50	0.96	0.894	2.2	0.85	1.06	1.549	1.39	1.56
7	9.14	30.00	3.05	7.62	30	bedreck.		1	30	80	1.33	1	1	1.00	40.0	158	98	1.01	40.30	5.4	45.66	0.93	1.022	2.2	0.85	1.01	2 000	171	1.68

	Liquefaction	Induced	Settlement	and	Lateral	Spreading	
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Dry Sand Settlement

D at		Limiting		Maximum		AL DI	AT TH	Vertical					Max Shear						Dry Sand
Depth		Shear	Paramet	Shear		arri,	arri					Average	Alloquius			(01)			Settlement
(m)	Depth (it)	Strain Ylum	er F <sub>e</sub>	Strain Yman	$\Delta H_i(m)$	(m)	(in)	Strain E.	$\Delta S_i(m)$	$\Delta S_i(in)$	Tava	Stress (p)	(Gmaz)	a	ь	y (%)	8:5 (%)	ENC (%)	(in)
											(tsf)	(isf)	(tsf)						
1.22	4.00	0 174	0.559	0.000	1.22	0.000	0.0	0.000	0.000	0.00	0.170	0.17	438.8	0 130	18753	1.00	1.049	1.172	1.1
2.44	2.00	0.003	-1.164	0.000	1.22	0.000	0.0	0.000	0.000	0.00	0.333	0.33	915.7	0 137	12372	0.46	0.176	0.195	0.2
3.05	10.00	0.054	-0.016	0.000	ū.61	0.000	0.0	0.000	0.000	0.00	0.420	0.42	985.5	0 1 4 6	10822	1.00	0.643	0.718	0.3
3.20	10.50	0.061	0.043	0.061	0.15	0.009	0.4	0.013	0.002	0.08	0.473	0.44	897.8	0.141	10510	0.00	0.000	0.000	0.0
4.57	15.00	0.020	-0.481	0.000	1.37	0.000	0.0	0.000	0.000	0.00	0.575	0.63	1162.8	0 148	2485	0.00	0.000	0.000	0.0
6.10	20.00	0.017	-0.544	0.000	1.52	0.000	0.0	0.000	0:000	0.00	0 766	0.83	1353.6	0.156	7139.8	0.00	0.000	0.000	0.0
9 14	30.00	0.002	-1.241	0.000	3.05	0,000	0.0	0.000	0.000	0.00	1.048	1.25	1786.2	0.173	5598	0.00	0.000	0.000	0.0
					LD =	0.01	0.4	S=	0.002	0.08								S=-	1.66
						(m)	(in)		(m)	(in)									(in)

Liquefaition Potential (m) Drs Settlement (1) Flag "nlp" – based on laboratory testing of fine content, plasticity index, liquid limits and potential intact moisture content "nlp" – no liquefactori potential



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		and a state	N A N A N A N A N A N A N A N A N A N A				
		445	NN NN NN NN NN NN NN NN NN NN NN NN NN				
		CRR for M=7.5 & c_e <sup>[m</sup> latin	0.123 0.165 2.000 2.000 2.000 2.000 2.000				
		Ke for Sind	110 011 011 011 100 100 100 100 100		Dry Sand ettlement (in)	20 00 00 00 00 00 00 00	(i) (i)
		dSF for Sard	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1- (3)	2 362 1 449 0 157 0 000 0 000 0 000	書
		AST mar			ds (%)	2.115 1.298 0.134 0.134 0.140 0.000 0.000	
		g	0.681 0.672 0.672 0.672 0.672 0.672 0.672 0.528 0.528 0.514	lement	(%) Å	100 1200 0.39 0.41 0.41 0.00 0.00	
		Streau Le chict, Seeff, ra	100 100 100 100 100 100 100 100 100 100	nd Sett	د.	20618 14919 11324 10981 10981 8609.6 7244.7 7244.7	
		M.Dow O	10 21 16 10 26 16 25 10 25 10 25 10 25 25 23 25	Dry Sa	a	0.130 0.133 0.139 0.140 0.140 0.140 0.156	
		ANfat Fines Content (	2000000000 2000111111		Max Shear Modulus (Gmaz) HSD	2775 2725 2725 2725 2725 2725 2725 2725	
		$(14)_{M_{\rm C}}$	515 525 515 515 515 515 515 515 515 515		konage tress (p) Arch	014 024 035 041 061 122	
		ð	120 115 115 115 116 116 1163		14 S	0145 0248 0248 0390 0410 0410 0723 0723	
		(12) (12)	8888888				
	0.5 19-2 ial	5	2 2 2 8 2 8 2 <u>2</u>				
	Ko = No = Dotent	N <sub>60</sub>	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		ÅS, (m)	000 000 000 000 000 000	(u) (u)
	auefactic	ರ	1 00 1 1 00 1 1 00 1 1 00 1 1 00 1 1 00 1 1 00	26	$\Delta S_1(m)$	0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000000	0.000 (m)
	Ē	ð	0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05	spreading	Vencal Reconsol Strain E,	0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000000	4
		ೆ	10 44 94 94 94 94 94 94	ateral S	(u)	000000000000000000000000000000000000000	(u)
		1.27		and L:	ALDA, (m)	0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.00 (m) re conten
	a on)	Energy Ratio, ER (%)	8 8 8 8 8 8 8 8	ttlement	ΔH, (m)	1.07 0.76 0.15 1.52 3.05 3.05	LD =
	a d cui ta	Einer Content (%)	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ced Sel	Kazandura Shear Maan Yaare	0000 0000 0000 0000 0000 0000 0000 0000 0000	mtal mu
	(ft) (b):ft) (b):ft) (a) (a) (b):e grou	teraUtes.	00000	ubul no	Percort arre	0.890 0.706 -1.531 -1.472 -1.472 -1.472 -1.472 -1.472 -1.450 -1.850	tod pue si
	1,047 7,9 10,00 1122,0 4,5 8 8 8 2 10 20 20 20 20 20	Flat: upr		puefactio	unsiting Streat train <sub>Then</sub>	0.437 0.244 0.001 0.000 0.000 0.000	ıquı d limi
	3.9 1922 204 204 113.04 9.5 113.50 6.6 6.6 6.6 6.6 6.6 6.6 6.6 6.6 6.6 6.	Soil Irpe (USCS)	Mr. SH SH SH SH SH SH SH SH	Lic	I Depth (A) S	3.50 5.50 9.50 1.10.00 2.000 2.000 2.000	icity index, l
	3	Measured	8 9 8 8 8 8 8 9 8 9 9 8 8 8 9 9 9 9 9 9		Depth (m)	1 07 2 90 5 15 9 14 9 14 9 14	outeat, plass
a er 21	(BSN40) he Depth Pl	Midjeant of Layer (m)	0 50 2 50 2 8 51 2 8 51				ng of fine co
Remark 15264.0 11/13/202 B.4	e (LN(m <sup>2</sup> )= e (LN(m <sup>3</sup> )= sie Linners ( d Equal Io i d Face (m)	Layer Intekness (m)	1 07 0.76 0.15 1.07 1.52 1.52 3.05				or atory test
	(g) = (h, M) = (h) = h(h) = h(h(	Depth 1 (ft)	3 50 6 60 9 50 20 00 30 00 30 00				ial ed on lab
	netre: ad Accel Magnitu Above W Below W Below W creento d Length. inpose d E inpose d E incefror	Depth (m)	107 185 290 205 457 610 914				on Fotent nent 1p" - bas
Project # Project # Date Boung	Ineut Lean Feak Grout Barthquke Water Takk Avenage Ya Avenage Ya Rorende D Rorende D Ro Ro Ro Ro Ro Bonng Dui	SFT Sample Number			,		Liquetactiv Dry Settler (1) Flag "n



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Martin Reimann P.O. Box 331 Albion, CA 95460 <u>martinreimann@icloud.com</u>



From:	
To:	Liam Crowley
Cc	
Subject:	CDFW comments: CDP_2024-0004 (Reimann & Schilke) - re-referral
Date:	Friday, January 10, 2025 8:57:02 AM

**Caution:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

## Liam,

Thank you for the opportunity to review this CDP application and associated documents including the updated biological report and RMMP. Please see this email for CDFW's comments and recommendations.

It is CDFW's understanding that the project description has been revised to include only the following: (1) the construction of a single-family residence, (2) the creation of a landscaped berm/knoll surrounding the residence, (3) the creation of a berm separating the residence and existing parking area, (4) portions of a water catchment area outside of any ESHA and/or ESHA buffers, (5) the construction of an ADU with an attached garage, (6) the construction of a storage shed, (7) repairs and improvements to existing fencing only in areas outside of ESHA and/or ESHA buffers, (8) the drilling of one (1) test well and conveyance of water lines only outside of ESHA and/or ESHA buffers, (10) new fencing only outside ESHA and/or ESHA buffers, (11) after-the-fact permitting of an existing driveway, and (12) mitigation of impacts to wetlands due to the development of the previously unpermitted driveway, including implementation of the RMMP. CDFW provides the following comments and recommendations in our Trustee Agency role to assist the County as Lead Agency in assessing a project's potential impacts:

CDFW comments:

- 1. The site's resources, as updated in the biological report and RMMP, are not reflected on the CDP application's site plan. This is problematic as it does not include the full extent of wetlands as per the wetland delineation (reviewed and approved by the Regional Board), does not identify the seasonal wetland creation site (a mitigation requirement from the Regional Board), and it appears the water catchment system will either be within ESHA, as designated by the updated biological report, or within the LCP's required buffers for ESHAs. CDFW does not have sufficient information to determine if the proposed development will or will not impact resources as the site plan (pdf page 18 of 111 and page 41 of 111, landscaping plan) report conflict the representation of development and the resources documented onsite as presented in the updated biological report, RMMP, and wetland delineation. The updated biological report and wetland delineation states (pdf page 25 of 91) states, "The proposed development project is strategically positioned beyond the 100-foot ESHA buffers, adhering to regulatory guidelines. Both the Limited-Density Rural Dwelling and the Garage/Accessory Dwelling Unit are within the building envelope of the Vested CDP# 1-81-85;" however, the development appears to encroach both into ESHA and the ESHA buffers. Please provide an updated site plan and ESHA map that identifies:
  - a. Location of the proposed seasonal wetland creation (page 83 of 111). It seems appropriate that the ESHA buffer on the current wetland ESHA should be extended to encompass this feature and it should also have a buffer identified for it as per the LCP (either 100' or 50' with the buffer analysis). The buffer analysis

would also need to be updated to incorporate the seasonal wetland creation.

- b. The full extent of resources as per the updated wetland delineation and biological report.
- c. Location and extent of low, symbolic fencing (see recommendation below).
- 2. It is CDFW's understanding that the proposed landscaping berm was a requirement from the property's initial CDP. Is the berm still required by either the County or the Coastal Commission to screen the development from Highway 1? The berm would most likely require soil to be imported to the site, which may significantly increase the introduction of invasive plant species. See pdf page 39 of 111 (landscaping notes).
- 3. The water catchment system as identified on the site plan appears to encroach into wetlands or their buffers. Please provide more information as to the construction and maintenance of this catchment system in addition to its proposed use. Any development in identified wetlands, as the updated wetland delineation, would be subject to the authority of the Regional Water Quality Control Board and require consultation and most likely, permitting from that regulatory agency.
- 4. Has CalFire 30' and 100' defensible space been incorporated into the development footprint? Will the CDP include a fire protection plan within the development envelope that outlines the allowable maintenance for fire safety and defensible space?
- 5. The installation of the existing driveway resulted in the fill of wetlands; however, the property owner has worked with the Regional Water Quality Control Board to resolve the Notice of Violation (April 2024). While the existing driveway was not installed as per the property's initial CDP, removing the existing driveway and installing it in the southern location would most result in additional impacts to natural communities and wetlands (see updated wetland delineation).
- 6. Future development or maintenance of the eastern watercourse and its culvert would be subject to notification to California Department of Fish and Wildlife under Fish and Game code section 1600 in addition to permitting by the Regional Water Quality Control Board.
- 7. Casting seed to establish wetland vegetation in the seasonal wetland may not be sufficient to achieve the success criteria (within five years); planting plugs would increase the likelihood of achieving success criteria cover requirements. PDF page 27 of 91 of the updated biological report and wetland delineation states, "Consider mitigating the possible impact of the existing driveway crossings by planting wetland vegetation in the amount to replace the protective values of the impact area of the driveway on the parcel, at a minimum ratio of one (1) to one (1), as per Mendocino County Code Sec. 20.719.020 - ESHA—Development Criteria. An appropriate native wetland vegetation would be Pacific reedgrass (*Calamagros's nutkaensis*), which will be planted in an area of the property that is not currently a wetland. Proposed locations of the new wetland is around SP06 and SP08, areas which currently are not wetlands." Additionally, the updated report includes performance and success criteria for Pacific Reed grass (7.4.2. Performance and Success Criteria: Aper 2 years of monitoring, cover of Pacific reedgrass (Calamagros's nutkaensis) should be >60% and increase by 2-5% yearly until the goal of 80% within the restoration area is reached by the end of the monitoring period (i.e., 5 years). In addition, the area covered by other non-invasive species will be reduced to <10%." The planting palette within the RMMP does not include the planting of this species. Will this species be added to the wetland planting palette?
- 8. Page 81 of 111: transects or plot be established to measure cover during the required monitoring and reporting period?
- 9. Has the County discussed a deed restriction with the applicant to prevent future development of the mitigation area and ESHAs as delineated in the 2024 updated biological report and wetland delineation? It would seem appropriate to restrict future development on the property due to the extent of wetland features and impacts to them through unpermitted development.
- 10. Appendix E of the updated biological report and wetland delineation indicates the high potential for species to occur including bats and California red-legged frog, but mitigation measures do not include appropriate avoidance, minimization or survey requirements for these species before or during construction. Has the project consulted with the USFWS for the potential presence of California red-legged frogs, a federally-listed (threatened) species? The report also indicates suitable bat habitat was identified onsite during protocol level surveys but did not identify the survey protocol or describe

the location or type of habitat present. The mitigation measures did not include measures to avoid or minimize impacts to bat species through seasonal avoidance or other means.

## **Recommendations:**

- 1. All fencing including that proposed along the coastal trail access shall be of a wildlife-friendly design.
- 2. The landscaping notes/plan should be revised to develop a planting palette that consists of locally native, appropriate species and not include any invasive plant species (see pdf pages 41-43 of 111).
  - a. Culinary plants and fruit trees, etc., should be planted in designated areas where they cannot escape into the native natural communities onsite or result in competition to native species proposed to vegetate the landscape berm. Culinary herbs should be established separately from the native vegetation that is proposed to vegetate the berm.
  - b. The berm's planting palette shall consist of locally, native species. The referral packet identified the planting palette for the berm. Some species are appropriate, such as Pacific reed grass, but others may not be. As an example, yellow bush lupine, which is not a locally native species and may be a problematic species, is proposed for planting on the berm. It is CDFW's understanding that the local California Native Plant Society, the Dorothy King Young chapter, recommends not planting this species. Please see their website for more information on the Mendocino coast's native vegetation and the chapter's contact information.
- 3. Invasive species shall be targeted for removal property-wide for a period of no less than ten years. If non-native tress including Monterrey pines are removed, they shall be replaced with locally appropriate, native species. Recommend removal of the non-native tree and shrub species that have been planted along the driveway.
- 4. Develop a landscaping/restoration plan that includes planting palettes for both landscaping and other planting property-wide, that includes invasive species management (locations, monitoring, and reporting) as well as means and methods to manage the invasive species.
- 5. To reduce potential for incidental encroachment into ESHA and ESHA buffers, install low, symbolic fencing at the outside edge of ESHA buffers and where development occurs within ESHA and/or ESHA buffers, the fencing shall be installed at the edge of development including on the edge of the driveway. Please see the attached markup as an example. The site plan should be updated to include the location and extent of this fencing.
- 6. Page 81 of 111: Recommend establishing photo vantage points and map of those locations with cardinal points.
- 7. Page 81 of 111: The annual monitoring report example mentions target wildlife species. What are the target wildlife species?
- 8. Incorporate mitigation measures, when revised (see below) as conditions of approval.
- 9. Revise mitigation measures to indicate what actions would be taken if species are found during pre-construction surveys including notification to the appropriate agencies and identification of suitable habitat to relocate species.
- 10. PDF page 29/91 of the updated biological and wetland delineation states, "The property owner and/or a consulting biologist will conduct an annual review between February and May each year to record these metrics and will make necessary adjustments to planting strategies and/or management practices based on annual performance to ensure ongoing success." The monitoring and any adjustments to planting strategies or management practices should be conducted by a qualified biologist or individual with the education and experience to identify the flora and fauna of coastal Mendocino County.
- 11. PDF page 30 of 91 in the updated biological report states, "The property owner has also started to implement physical barriers (hedge) to protect sensitive areas from human disturbances." The location of this hedge and the species planted are not

shown on the site plan or described further within the application's documents. Where is this hedge located? The hedge should not include non-native species.

Please give me a call to discuss any questions you may have regarding these comments and recommendations.

Best, Jenn

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