

October 24, 2022

CITY OF NEEDLES



Riverlux Resort Conditional Use Permit and General Plan Amendment

City of Needles
Planning Department
817 Third Street | Needles, California 92363

INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

Project Title: Riverlux Resort

Assessor's Parcel Number: 0660-301-13-0000, 0185-058-15-0000, 0185-067-15-0000, 0185-067-20-0000, 0186-021-01-0000 & 0185-109-48-0000

Lead agency name and address: City of Needles Planning Department, 817 Third Street, Needles, California 92363

Contact person and phone number: Dawn Covello, City Planner; phone: (760) 326-5700 x127; fax: (760) 326-6765; email: dcovello@cityofneedles.com

Project Location: The proposed project site is located in the City of Needles in San Bernardino County, California in Township 09 North, Range 23 East, Section 29. The assessor's parcel numbers (APN) are 0660-301-13, 0185-058-15, 0185-067-15, 0185-067-20, 0186-021-01 and 0185-109-48, and the parcels total to 14 acres in size. The proposed project site is located on both sides of Needles Highway between North K Street and River Road. See Appendix A: Project Maps for project location.

Project sponsor's name and address: Jeffrey West; phone: 951-553-0599; email: jeffw@riverluxresort.com; address: 29991 Canyon Hills Road, Suite 1709 PMB-300, Lake Elsinore, CA 92532

General plan description: Parks & Recreation. The proposed project will require a general plan amendment to change the existing land use designation to Commercial Resort. At present the City is updating its Land Use Element, combining its land use and zoning designations. The proposed project site is anticipated to have a land use designation of Planned Unit Development (PUD) and C-2 at the time of project construction.

Zoning: The proposed project site is currently zoned CRR (Commercial, Residential, Resort), C-2 (General Commercial), and R-3 (Multiple Family Residential). The proposed project will require a general plan amendment to change the existing zoning to PUD. At present the City is updating its Land Use Element, combining its land use and zoning designations. The proposed project site is anticipated to have a zoning designation of PUD and C-2 at the time of project construction.

Site history: The proposed project site is located along Needles Highway within an urbanized area of the City of Needles.

Historical aerial imagery from 1969 depict history of vegetation removal on portions of the project site and there is evidence of previous structures based on concrete slabs/foundation found onsite.

Purpose & Need: The purpose of the proposed project is to provide residences of Needles Recreational Vehicle (RV) resort-style housing that offers amenities and proximity to recreational activities including golfing and boating.

Project description: Riverlux Resort is a proposed Townhome/Recreational Vehicle (RV) Community in Needles, CA that will be constructed on 14 acres of land along Needles Highway between North K Street and River Road. The City is currently updating its Land Use Element, combining its land use and zoning designations. The proposed project site is anticipated to have a land use designation and zoning designation of Planned Unit Development (PUD) at the time of project construction. At present, the proposed project requires a general plan amendment to change the existing land use and zoning designations to PUD. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 sq. ft. grocery store. The townhouses proposed for construction will consist of 58 single family townhomes which accommodate parking for RV's. There will be three models being constructed within the proposed project area and consist of single-story, two-story, and three-story models. The proposed project will have five phases of construction until project completion. Ground will be leveled at appropriate elevations. See Appendix B: Project Site Plans for the location and layout of the proposed buildings. Buildings constructed onsite will have a maximum height of 35 feet to minimize visual profile. All construction will

be completed to the standards of the International Building Code for commercial and residential structures, including the installation of smoke and fire detection alarms. Sufficient parking will be installed around the grocery store which will include 80 parking spaces. Four Americans with Disabilities Act (ADA) parking spots will be designated based on the 2010 ADA Standards for Accessible Design which requires one spot for every twenty-five. Additionally, five parking spots will be dedicated for electric vehicles. The perimeter of the livable townhomes will be lined with 6' concrete block wall. Landscaping is proposed around the block wall and will consist of desert tolerant plants that require minimal maintenance and water and mimic the visual aesthetics of the City of Needles. The Tentative Tract Map (TTM) for the proposed development is identified as TTM 20478 and is attached in Appendix B. It has been confirmed at the time of this writing the digital billboard is no longer a part of the scope of work of the proposed project; however, it may be mentioned in attached supporting technical documents.

Construction and Operational Considerations

Construction is to begin as soon as possible with an expected date to begin construction of townhomes in summer of 2022. Construction hours will be limited to normal working hours during the week in an effort to minimize effects due to construction related activities such as vehicular traffic and noise. Construction activities will not occur during evenings, or Sundays, or on Holidays. Equipment will be fitted with mufflers to further reduce noise levels.

The following dust control measures will be implemented during both phases of construction activities. These measures are to ensure compliance with Air Quality Regulation IV, Rule 403–Fugitive Dust to reduce nuisance fugitive dust generation:

- All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered daily for dust suppression when construction activities are occurring on-site.
- All trucks transporting soil, sand, or any other loose material off-site shall be covered.
- All stockpiled soil, sand, or any other loose material left on-site shall be covered and secured.
- Adjacent public roads shall be kept clean of loose dirt tracked onto the roadways from the construction-site. A street sweeper shall be used as needed.
- All vehicle speeds shall be limited to 5 miles per hour on the proposed project site.

Utilities

The proposed development will be served by water supplied by the City of Needles and will require an extension of an existing water line. The operational water needs are 0.32 gallons per minute (gpm) per household, and with 58 homes this equates to 18.56 gpm for the entire development after full build-out.

The proposed development will connect with the City of Needles sewer line for wastewater needs. The proposed project will use electrical power supplied by the City of Needles Public Utility Authority. The estimated power draw for the development is estimated at 0.003653 megawatts (MW).

Access

Access to the proposed development will be available from Needles Highway, North K Street, and River Road. Entrances to the townhomes will be gated and operated through remote access. A security pavilion will be located on the south end of the development and will provide residents with assistance as needed. All installed lighting will be down-cast and shielded from sunset to sunrise to avoid nighttime glare.

Surrounding Land Uses and Setting

The proposed project site is located within an urbanized area of the City of Needles. Immediately north and east of the proposed project site are mobile home residences; to the west are single family residences and commercial buildings, and to the south is vacant land that borders the Rivers Edge Golf Course.

Other Public Agencies Whose Approval is Required

California Department of Fish and Wildlife

Pacific BioScience, Inc.

Riverlux Resort Initial Study and Mitigated Negative Declaration

TABLE OF CONTENTS

Initial Study and Draft Mitigated Negative Declaration	II
Environmental Factors Potentially Affected	8
Evaluation of Environmental Impacts:	9
Checklist, Discussion of Checklist Responses, Proposed Mitigation	11
1. Aesthetics	11
2. Agriculture and Forestry Resources	13
3. Air Quality	15
4. Biological Resources	19
5. Cultural Resources	31
6. Energy	33
7. Geology And Soils	34
8. Greenhouse Gas Emissions.....	37
9. Hazards and Hazardous Materials	40
10. Hydrology and Water Quality.....	42
11. Land Use and Planning.....	45
12. Mineral Resources	46
13. Noise	47
14. Population and Housing.....	50
15. Public Services	51
16. Recreation.....	53
17. Transportation.....	54
18. Tribal Cultural Resources.....	56
19. Utilities and Service Systems	57
20. Wildfire	59
21. Mandatory Findings of Significance	60
22. Discussion of Mitigation Measures and Applicant Proposed Restrictions.....	63
23. Earlier Analyses	65
Source/Reference List.....	66
Mitigation Monitoring and Reporting Plan:.....	69

LIST OF TABLES

Table 1: Significant Emissions Thresholds	24
Table 2: Special-Status Plant Species Potential Occurring within the Project Vicinity	31
Table 3: Special-Status Animal Species Potential Occurring within the Project Vicinity.....	31
Table 4: Recorded Sites within a Two-Mile Buffer of the Project Area	39
Table 5: Construction Equipment Noise.....	57

LIST OF APPENDICES

Appendix A	Project Site Maps	72
Appendix B	Project Site Plans	73
Appendix C	CalEEMod Analysis.....	74
Appendix D	Biological Resources Assessment.....	75
Appendix E	Focused Plant Survey	76
Appendix F	Jurisdictional Determination	77
Appendix G	Hydrology Study	78
Appendix H	Noise Study	79
Appendix I	Fire Condition Letter.....	80
Appendix J	VMT Screening Evaluation	81
Appendix K	City of Needles - Will Serve Letters	82
Appendix L	Utility Memos	83

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the City's intent to adopt an MND for this project. This does not mean that the decision regarding the project is final. This MND is subject to notification based on comments received by interested agencies and the public.

The City has prepared this Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on Agriculture and Forestry Resources, Mineral Resources, Public Services, and Recreation.

In addition, the proposed project would have no significant effect on Aesthetics, Air Quality, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazardous and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Traffic and Transportation, Utilities and Service Systems, and Wildfire.

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| ☐ Aesthetics | ☐ Agriculture/Forestry Resources | ☐ Air Quality |
| ☒ Biological Resources | ☒ Cultural Resources | ☐ Energy |
| ☐ Geology/Soils | ☐ Greenhouse Gas Emissions | ☐ Hazards/Hazardous Materials |
| ☐ Hydrology/Water Quality | ☐ Land Use/ Planning | ☐ Mineral Resources |
| ☒ Noise | ☐ Population/Housing | ☐ Public Services |
| ☐ Recreation | ☐ Transportation | ☒ Tribal Cultural Resources |
| ☐ Utilities/Service Systems | ☐ Wildfire | ☐ Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project COULD have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project COULD have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant

to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed name

For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards.
- All answers must take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 21, “Earlier Analyses,” may be cross-referenced).
- Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - Earlier Analysis Used: Identify and state where they are available for review.
 - Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyze in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures of earlier analyses.
 - Mitigation Measures: For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which address site-specific conditions for the project.
- Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plan, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.
- This is only a suggested form, and lead agencies are free to use different formats, however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- The explanation of each issue identify:
 - The significant criteria or threshold, if any, used to evaluate each question; and
 - The mitigation measure identified, if any, to reduce the impact to less than significant.

CHECKLIST, DISCUSSION OF CHECKLIST RESPONSES, PROPOSED MITIGATION

1. AESTHETICS

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Setting

The proposed project site is located on both sides of Needles Highway between North K Street and River Road in the City of Needles, CA. A regional and site location map can be found in Appendix A: Project Site Maps.

Historical aerial imagery from 1969 depict history of vegetation removal on portions of the project site and there is evidence of previous structures based on concrete slabs/foundation found onsite. Due to the nature of the plant community on the site, size, age and type of plants, it appears no development has ever occurred.

Analysis:

- a) **Finding:** The proposed project will not have a substantial adverse effect on a scenic vista. The proposed project will have No Impact on any scenic vista or scenic resources.

Discussion: The proposed project will not have a substantial adverse effect on a scenic vista because there are no designated scenic vistas or scenic resources within the immediate area of the proposed project site.

- b) **Finding:** The proposed project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The proposed project will have No Impact on scenic resources such as rock outcroppings, trees, and historic buildings.

Discussion: The proposed project will not include large vertical elements that might be visible from surrounding areas or that might block views of the mountains to the west or the Colorado River to the east. Additionally, there are no rock outcroppings located on the proposed project site. There are no historic buildings on the proposed project site or immediately adjacent to the project site. El Garces is the closest known historic building and it is approximately 0.5 miles away from the proposed project site. The project site is just 0.25 miles northeast of I-40, and although I-40 is eligible for inclusion in the State Scenic Highway System, it has not officially been designated as a scenic highway by the California Department of Transportation. Therefore, the proposed project is not located within the vicinity of an officially designated state scenic highway and thus would not involve impacts to scenic resources along a state scenic highway.

- c) **Finding:** The proposed project will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The proposed project will have a Less than Significant Impact regarding the degradation of the existing visual character or quality of the site and its surroundings.

Discussion: The existing visual character of the site is desert scrub that is surrounded by a mix of residential and

commercial structures, and a nearby municipal golf course. The proposed project occurs within a highly urbanized area. The design of the proposed structure will not include any large visible elements that might block views of the mountains to the south or the river to the north east. Structures built within the development will not exceed a maximum height of 35 feet (Operating Restriction AES-2). Needles Municipal Code regulates development standards in residential areas to govern the scenic quality based on lot size, lot coverage, building and structure height, setbacks, landscaping requirements, signs, and other built-environment standards that affect the scenic quality of an urbanized area. The proposed project is designed to comply with applicable development standards for residential zones. Desert shrubs native to this area will be used as landscaping around the perimeter of the development to maintain the look of its surroundings.

- d) Finding: The proposed project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The proposed project will not create a new source of substantial light or glare and will have No Impact on day or nighttime views of the area.

Discussion: All installed street lighting will be down-cast and shielded from sunset to sunrise to avoid nighttime glare. The project proponent will adhere to the City's lighting standards regarding the fixture type, illumination levels, wattage, and shielding, which will moderate any light generated from the proposed project to a level that will not contribute adverse impacts to nighttime views (AES-1).

Applicant Proposed Operating Restrictions:

AES-1: The proposed project will be in compliance with the City's lighting standards regarding fixture type, wattage, illumination levels, and shielding. The landscaping and planting plan will include the planting of desert-appropriate and native vegetation such as palm trees and native desert cacti, consistent with the visual context of the area. The planting palette will prohibit the inclusion of invasive species that are listed on CalIPC and the CDFA California Noxious Weeds list.

AES-2: The proposed buildings within the development will not exceed 35 feet in height.

Mitigation: None required.

2. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Setting:

The proposed project is located in an area within the City of Needles that is developed and surrounded by residential and commercial lots. The proposed project is not within or adjacent to any land used for agricultural use or zoned for agriculture (California Department of Conservation 2018), which is neither forest land nor zoned timberland (San Bernardino County 2007). Residential and commercial structures surround the proposed project area.

Analysis:

- a) **Finding:** The proposed project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The project will have No Impact to farmland and will not convert any Farmland to non-agricultural use.

Discussion: The proposed project is not within the survey boundary for the California Resource Agency's Farmland Mapping and Monitoring Program, and no farmland is present within the proposed project area.

- b) **Finding:** The proposed project will have No Impact on existing zoning for agricultural use or a Williamson Act contract.

Discussion: The proposed project site is currently zoned CRR (Commercial, Residential, Resort), C-2 (General Commercial), and R-3 (Multiple Family Residential). The proposed project will require a general plan amendment to change the existing zoning to PUD. At present the City is updating its Land Use Element, combining its land use and zoning designations. The proposed project site is anticipated to have a zoning designation of PUD and C-2 at the time of project construction. The land is not under a Williamson Act contract.

- c) **Finding:** The proposed project will not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526). There will be No Impact to the zoning of forest lands or timberlands.

Discussion: There is no forest land as defined in Public Resources Code section 12220(g) or timberland as defined in Public Resources Code section 4526 in the proposed project area or associated with the proposed project in any way.

- d) Finding: The proposed project will not result in the loss of forest land or conversion of forest land to non-forest use. There will be No Impact to forest land and no conversion of any forest land to non-forest use.

Discussion: The proposed project site consists of desert scrub in the City of Needles, with no associated forest land.

- e) Finding: The proposed project will not involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. The proposed project will have No Impact on existing Farmland or forest land.

Discussion: The proposed project site consists of desert scrub within an urbanized area of the City of Needles, with no associated Farmland and no forest land. No direct effects, indirect effects, or cumulative effects of the proposed project with other projects will result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Applicant Proposed Operating Restrictions: None.

Mitigation: None required.

3. AIR QUALITY

Where available, the significant criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Setting:

The proposed project site is located within the Mojave Desert Air Basin in the eastern portions of San Bernardino County and Riverside County, and portions of Kern and Los Angeles Counties. The City of Needles is located within the Mojave Desert Air Quality Management District (MDAQMD). The proposed project site is located within the eastern portion of the MDAQMD. Sensitive receptor land uses near the project site primarily include commercial and residential parcels to the north, west and east. Adjacent parcels to the south are vacant land with a golf course to the southeast.

The MDAQMD is listed as “non-attainment” for the following Federal Standards: O3 and PM10 (MDAQMD 2016). The MDAQMD is listed as “non-attainment” for the following California Standards: Ozone (O3) and Respirable Particulate Matter (PM10), as well as Fine Particulate Matter (PM2.5) only in the southwest corner of the desert portion of San Bernardino County (MDAQMD 2017).

Regarding significance, any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The City will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s) 1;
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that multi-phased project (such as project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

Table 1: Significance Emissions Thresholds

Criteria Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Greenhouse Gases (CO2e)	100,000	548,000

Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO _x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO _x)	25	137
Particulate Matter (PM ₁₀)	15	82
Particulate Matter (PM _{2.5})	12	65
Hydrogen Sulfide (H ₂ S)	10	54
Lead (Pb)	0.6	3

Due to the nature of the proposed project and the design features of the structures, no significant emissions noted in Table 1 are expected to be emitted during the operation of residences after construction, with the possible exception of PM₁₀ and PM_{2.5}. These values are expected to be less than an estimated 10 lbs daily.

The proposed project's estimated construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) and results of the model can be viewed in Appendix C. All emissions were analyzed on an annual basis for construction and operational emissions and were found to be below the annual thresholds viewed in Table 1.

Equipment used during construction will be compliant with Tier 4 requirements and therefore meets emission EPA and AQMD emission standards for all pollutants.

Analysis:

- a) Finding: The proposed project will not conflict with or obstruct implementation of the applicable air quality plan. With implementation of the proposed operating restrictions, potential impacts would be considered less than significant.

Discussion: It is the MDAQMD's responsibility to achieve and maintain air quality standards established by state and federal governments. To meet these standards, each air quality management district creates and implements a plan.

The MDAQMD is in a "non-attainment" status for O₃ and PM₁₀ Federal health protective standards for air pollution (ambient air quality standards), and also "non-attainment" for O₃, PM₁₀, and PM_{2.5} state health protective standards (MDAQMD 2018). Because the "non-attainment" designation for PM_{2.5} applies occurs only in the southwest portion of San Bernardino County, it does not apply to the area of the proposed project.

A potential exists for significant impact to air quality if the project conflicts with or obstructs the implementation of the MDAQMD plan. Although the proposed project could have an incremental increase in emissions within the district, the issue is whether anticipated project-related impacts are anticipated and addressed properly in the MDAQMD plan and reduced where feasible. It is necessary to assess if the proposed project is consistent with the MDAQMD plan.

The California Clean Air Act requires the MDAQMD achieve certain standards for the PM₁₀ and O₃. The MDAQMD prepared the PM₁₀ Attainment Plan Final Report in July 1995. The report notes the area around the City of San Bernardino as the location of the PM₁₀ source. The project is not located within this area. The report states that most of the northern and eastern portions of the county are not monitored, indicating this area is not the primary source or of primary concern. The MDAQMD Plan states measures for construction activities. These measures have been incorporated into this proposed project.

This proposed project is not expected to conflict with or obstruct the implementation of the MDAQMD Attainment Plan for PM_{2.5}, PM₁₀, or O₃.

Additionally, operating restrictions AQ-1 (listed below) will be implemented to minimize potential impacts to air quality.

- b) Finding: The project will not violate any air quality standard or contribute substantially to any existing or projected air quality violation. Impacts would be considered less than significant.

Discussion: The MDAQMD regulates air quality in San Bernardino County. Air quality standards were established for emissions such as visible emissions, fugitive dust, and particulate matter. In accordance with the Air Quality Regulation IV–Prohibitions, Rule 402–Nuisance, “a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property” (MDAQMD 1977).

Potential for air quality contaminants can arise during either or both the construction phase or operational phase of the proposed project. Potential for each is discussed below.

Potential Impacts During Construction

There is potential for the project to create fugitive dust, which adds to the particulate airborne matter, during construction of any of the structures, parking areas, landscaping, and especially clearing and grubbing. This occurs with the exposure of bare soil during this phase. Precautions in accordance with Air Quality Regulation IV, Rule 403–Fugitive Dust are required. During all construction activities, dust control measures shall be implemented to reduce fugitive dust generation. Operating restriction AQ-1 is described at the end of this section. Impacts to air quality as a result of implementation of this proposed project, along with the implementation of air quality operating restrictions, are expected to be less than significant.

Potential Impacts During Operation

Access roads and driveways to the proposed project site will be required to be paved with asphalt. As such, disturbance to soil from vehicular traffic is not expected. Because on-site dust generation from vehicle and truck traffic during normal operation of the built residences are not expected, impacts from fugitive dust and other particulate matter are considered less than significant.

Carbon monoxide (CO) hot spots and impacts to the ozone are typically associated with heavy vehicular traffic and vehicles idling at busy intersections (intersections with 100,000 daily vehicle trips). There are no intersections within the region of the proposed project that meet these criteria. Because the daily vehicle trips are expected to be about 256 after the proposed project is built, emissions from such intersections or vehicular traffic are not expected with the implementation of the project. In addition, the MDAQMD is currently in attainment/unclassified for CO on the federal and state levels.

The proposed project’s estimated construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) and results of the model can be viewed in Appendix C. All emissions were analyzed on an annual basis for construction and operational emissions and were found to be below the annual thresholds viewed in Table 1.

The project will be served by city water and will utilize grid power provided by the Needles Public Utility Authority. The primary use of power will be for residential use. As such, no violation to any air quality standard would occur with the implementation of the proposed project. Also, the impact to air quality would be less than significant.

- c) Finding: The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Discussion: The MDAQMD is in a “non-attainment” status for O₃ and PM₁₀ Federal health protective standards for air pollution (ambient air quality standards), and also “non-attainment” for O₃, PM₁₀, and PM_{2.5} state health protective standards (MDAQMD 2018). With incorporation of operating restriction AQ-1, potential impacts would be considered less than significant.

Construction and operational activities are not expected to generate total emissions (direct or indirect) in excess of thresholds as defined by federal or state governments. As described previously, measures will be taken to control

fugitive dust during the construction phase (operating restriction AQ-1). Operation of construction equipment could result in temporary incremental emissions within the air basin; however, because of the relatively small size of the proposed project, and the requirement for all equipment used on site will meet CARB standards, cumulative impacts resulting from the implementation of the proposed project are expected to be less than significant. Therefore, the project will not result in a cumulative significant increase of any criteria pollutant for which the proposed project region is “non-attainment” under an applicable Federal or State ambient air quality standards.

- d) Finding: The project will not expose sensitive receptors to substantial pollutant concentrations. There will be no impact.

Discussion: Sensitive receptor land uses near the project site primarily include commercial and residential parcels to the north, west and east. Adjacent parcels to the south are vacant land with a golf course to the southeast.

As stated previously, the proposed project would not produce significant quantities of criteria pollutants during the temporary construction phase or during residential use. Therefore, the implementation of the proposed project would not expose sensitive receptors to pollutants.

- e) Finding: The project may create objectionable odors affecting a substantial number of people; however, with applicant proposed operating restriction AQ-1 incorporated, the impact will be less than significant.

Discussion: Construction of the project could result in emission of odors from construction equipment and vehicles (e.g., diesel exhaust). It is anticipated that these odors would be short-term, limited in extent at any given time, and distributed throughout the project site throughout construction, and, therefore, would not affect a substantial number of individuals. This is considered a less than significant impact.

Applicant Proposed Operating Restrictions:

AQ-1: During short-term construction activities, the following dust control measures will be implemented to reduce nuisance dust generation:

- All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered twice daily for dust suppression when construction activities are occurring on-site.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All standing soil, sand, or other loose material left on-site shall be covered and secured.
- Adjacent public roads shall be kept clean of loose dirt tracked onto the roadways from the construction-site.
- All vehicle speeds shall be limited to 5 miles per hour.

4. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting:

The following federal, state, and local regulatory requirements are applicable for the proposed project and are important to consider when analyzing potential impacts to biological resources. These regulatory requirements are discussed below.

Regulatory Requirements

Endangered Species Act

Under provisions of Section 7(a)(2) of the Endangered Species Act (ESA), a Federal agency that permits, licenses, funds or otherwise authorizes a project activity must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify critical habitat. As such, focused surveys were conducted to determine absence/presence of any listed species with the potential to occur within the biological survey area (BSA) for impact evaluation.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC. 703-712), as amended, governs take, possession, import, export, transport, selling, purchasing or bartering of migratory birds, their eggs, parts and nests, except as authorized under a valid permit (50 CFR 21.11). The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes, and requiring harvests to be limited to levels that prevent over- utilization. Section 704 of the MBTA states that the Secretary of the Interior is authorized and directed to determine if, and by what means, the take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take but ensuring that take is compatible with the protection of the species.

Clean Water Act, Section 401 Jurisdiction

Section 401 of the Clean Water Act (CWA) is administered by the State (SWRCB). Section 401 requires that any applicant for a federal permit for activities that involve a discharge to waters of the United States (WUS) shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with applicable provisions under the CWA. Section 401 Water Quality Certification is required for discharges to activities regulated by the U.S. Army Corps of Engineers (USACE) under Section 404. SWRCB jurisdiction typically matches the USACE jurisdictional boundaries for WUS mapped at the ordinary high-water mark (OHWM)., s

Pacific BioScience, Inc.

Riverlux Resort Initial Study and Mitigated Negative Declaration

Clean Water Act, Section 404 Jurisdiction

Section 404 of the CWA, which is administered by the USACE, regulates discharges of dredged or fill material into WUS. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a nexus identified in the USACE regulations) connection to interstate commerce.

OHWL Non-Wetland Jurisdiction

Non-wetland WUS are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses (USACE 1986). The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the OHWM. The OHWM is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics including clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter, and debris, or other appropriate means that consider the characteristics of the surrounding areas” (USACE 1986). The bank-to-bank extent of the channel that contains the water- flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of USACE jurisdiction. The upstream limits of other WUS are defined as the point of where the OHWM is no longer perceptible.

Three-Parameter Wetland Jurisdiction

Wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (USACE 1986). To be determined a federal wetland, the following three criteria should be met:

- A majority (greater than 50 percent) of dominant vegetation species are wetland associated species;
- hydrologic conditions exist that result in periods of flooding, ponding, or saturation for at least 5 percent of the growing season; and,
- soils saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part and should exhibit hydric soil characteristics indicative of permanent or periodic inundation.

Wetland vegetation is normally characterized by vegetation in which more than 50 percent of the cover of dominant plant species is composed of obligate wetland, facultative wetland, or facultative species that occur in wetlands.

Solid Waste Agency of Northern Cook County versus U.S. Army Corps of Engineers

The aforementioned characteristics may not be apply to isolated, non-navigable waters (including vernal pools) pursuant to the January 9, 2001 Supreme Court decision in the case of Solid Waste Agency of Northern Cook County versus U.S. Army Corps of Engineers (SWANCC 2001). The SWANCC decision eliminated jurisdiction over isolated, intrastate, non- navigable WUS where the sole basis of jurisdiction is founded on the presence of migratory bird habitat.

Rapanos v. United States and Carabell v. United States

USACE (2008a) will assert jurisdiction categorically and on a case-by-case basis, based on the court cases of Rapanos v. United States and Carabell v. United States over:

1. Traditional navigable waters (TNWs) and their adjacent wetlands;
2. Non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally) and wetlands that directly about such tributaries (e.g., not separated by uplands, berm, dike, or similar feature); and,
3. Non-RPWs if determined (on a fact-specific analysis) to have a significant nexus with a TNW, including non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but that do not directly about a relatively permanent, non-navigable tributary. Absent a significant nexus, jurisdiction is lacking.

Of particular note is that RPWs do not include ephemeral tributaries, which flow only in response to precipitation, and intermittent streams, which do not typically flow year-round or have continuous flow at least seasonally (e.g., typically three months). Determination of a significant nexus involves a functional analysis, and consideration of both hydrological and ecological factors for each tributary.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that the significant environmental impacts of proposed projects or actions undertaken, funded, or requiring an issuance of a permit by a state or local agency are identified, government decision

maker and the public are informed about the effects of those actions, and that steps are taken in order to avoid or mitigate those environmental impacts, if feasible.

California Endangered Species Act and California Fish and Game Code § 2080 And 2081

The California Endangered Species Act (CESA) is administered by the California Department of Fish and Wildlife (CDFW) and prohibits the “take” of plant and animal species identified as either threatened or endangered in the State of California by the Fish and Game Commission. “Take” includes pursue, hunt, kill, or capture a listed species, or any other action that results in adverse impacts. Sections 2080 and 2081 of the California Fish and Game Code (FGC) allow the CDFW to authorize exceptions to the “take” of the State-listed threatened or endangered plant and animal species for purposes such as public and private development. State lead agencies are required to consult with CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of habitat.

California Fish and Game Code § 1600-1603

The State of California Code of Regulations empowers the CDFW to issue a Streambed Alteration Agreement under Section 1600-1603 of the FGC for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream or a lake as defined by CDFW.

CDFW has not defined wetlands for jurisdictional purposes. CDFW generally includes within the jurisdictional limits of streams and lakes any riparian habitat present. Riparian habitat includes willows, alders, and other vegetation typically associated with stream banks or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Wetlands not associated with a lake, stream or other regulated areas generally are not subject to CDFW jurisdiction.

Porter-Cologne Water Quality Control Act

Pursuant to the Porter-Cologne Water Quality Control Act, California Water Code, Division 7 (Porter-Cologne), the SWRCB is granted ultimate authority over water quality policy for the State of California. The SWRCB/SWRCBs, oversee water quality at the local and regional levels, and regulate pollutant and nuisance discharges into Waters of the State of California (WSC). WSC are defined as any surface water or groundwater, including saline waters (Water Code 13050 (e)) within the boundaries of the state. Before allowing discharges that may affect the quality of WSC, a Report of Waste Discharge must be filed with SWRCB.

Biological Resources

Prior to visiting the project site, a review of the California Natural Diversity Data Base (CNDDB) and Biogeographic Information Observation System (BIOS), and USFWS Information for Planning and Consultation (IPaC) website was conducted to identify if any special-status plant and animal species are known to occur within in the vicinity. These databases identify recorded locations of special-status plant and animal species in the project vicinity and, therefore, having the potential to occur on the project site. Also reviewed prior to a site visit were U.S. Fish and Wildlife Service Critical Habitat Portal online mapper to determine the presence of designated critical habitat, aerial photographs, and relevant USGS 7.5-minute topographical quadrangles. The species lists pulled from CNDDB and IPaC can be viewed in Appendix D: Biological Resources Assessment.

Plant Communities

The project site contains two plant communities: fourwing saltbush scrub and tamarisk thickets. A complete description of these communities is based on Sawyer and Keeler-Wolf A Manual of California Vegetation, 2nd Edition (2014) and is provided below.

Fourwing Saltbush Scrub

The fourwing saltbush (*Atriplex canescens* shrubland alliance) scrub community is dominated by a single species of saltbush, the fourwing saltbush. Fourwing saltbush scrub is a low-growing plant community with shrubs typically less than three feet (one meter) in height. This community is usually found on fine-textured, poorly-drained soils with high alkalinity and/or salinity. Additional shrub species present within the fourwing saltbush scrub within the BSA included allscale saltbush (*Atriplex polycarpa*), bush seepweed (*Suaeda moquinii*), and creosote (*Larrea tridentata*). This community was observed throughout the BSA and accounts for approximately 13.14 acres.

Tamarisk thickets

Tamarisk thickets (*Tamarix ramosissima*) consist of stands of this invasive shrub that occurs in arroyo margins, lake margins, ditches, washes, rivers, and other water courses. Several distinct thickets were observed within the southern half of the project site and amount to approximately 0.68 acres.

A visual representation of these plant communities can be viewed in Appendix E: Focused Plant Survey.

Plant Species

One special-status plant, spiny-hair blazing star (*Mentzelia tricuspis*) is noted as occurring within the region of the project site (CDFW 2021). Below is a description of habitat requirements of this special-status plant. Due to the highly disturbed nature of the project site, soil requirements, and plant community association, this special-status plant is not expected to occur within the project limits. A focused plant survey was conducted during the optimal time of year to detect this species and it was not identified on the project site. Below is a table of the plant that was evaluated.

An additional focused plant survey will be conducted prior to construction during the appropriate growing season to identify any special-status desert dwelling plants that have the potential for occurring on the proposed project site (Mitigation Measure 4.1). Should any of these species be found onsite, consultation with CDFW will be initiated.

Table 2: Special-Status Plant Species Potential Occurring within the Project Vicinity

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
PLANTS				
<i>Mentzelia tricuspis</i> Spiny-hair blazing star	CNPS List 2B.1	Mojavean desert scrub; sandy or gravelly slopes and washes, 150-1280 m.	Marginal suitable habitat occurs on site. Low quality disturbed habitat.	Not expected to occur on site. Not observed during focused survey.

Animal Species

California Department of Fish and Wildlife CNDDDB and US Fish and Wildlife databases were researched to determine special-status species known to occur within the vicinity of the site, and therefore with potential to occur on the site. Also, wildlife species covered by the Lower Colorado Multi-species Habitat Conservation Program were considered. Below is a table of all species evaluated with discussion further below for species that have potential to occur on site. A total of 37 special-status wildlife species (2 invertebrate, 4 fishes, 3 amphibians, 3 reptiles, 15 birds, and 10 bats) are noted as occurring within the region of the project site (US F&WS 2021) (CDFW 2021) (LCR MSHCP 2021).

Table 3: Special-Status Animal Species Potential Occurring within the Project Vicinity

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
INVERTEBRATES				
<i>Hesperopsis gracieae</i> MaNeill's sootywing	CA: S1	Requires dense stands of quailbush.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Danaus plexippus</i> Monarch butterfly	US: CT	Found west of the Rocky Mountains; adults nectar on flowering plants, larval monarchs dependent on native milkweed plants	No habitat present.	Not expected to occur, therefore no effect on species.
FISHES				
<i>Catostomus latipinnis</i> Flannelmouth sucker	CA S1 Sensitive	Colorado River. Spawns in riffles.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Gila cypha</i> Humpback chub	US: FE	Colorado River.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Gila elegans</i> Bonytail	US: FE CA: SE	Colorado River.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Xyrauchen texanus</i> Razorback sucker	US: FE CA: SE	Colorado River. Spawns in sand gravel rocks.	No habitat present.	Not expected to occur, therefore no effect on species.
AMPHIBIANS				
<i>Bufo Incilus alvarius</i> Colorado River toad	LCR MSHCP listed.	Requires ponds, slow-moving streams, temporary pools.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Rana Lithobates onca</i> Relict leopard frog	LCR MSHCP listed.	Found in Back Canyon Virgin River.	Outside known range.	Not expected to occur, therefore no effect on species.
<i>Rana Lithobates yavapaiensis</i> Lowland leopard frog	BLM sensitive; LCR MSHCP listed.	Permanent and intermittent streams, sloughs, beaver ponds.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
REPTILES				
<i>Gopherus agassizii</i> Desert tortoise	US: FT CA: ST	Historically found throughout the Mojave and Sonoran Deserts into Arizona, Nevada, and Utah. Occurs throughout the Mojave Desert in scattered populations. Found in creosote bush scrub, saltbush scrub, thornscrub (in Mexico), and Joshua tree woodland. Found in the open desert as well as in oases, riverbanks, washes, dunes, and occasionally rocky slopes.	Marginal suitable habitat present.	No sign observed during focused survey. This species is not expected to occur and therefore, no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Phrynosoma mcalli</i> Flat-tailed horn lizard	CDFW: SSC	Sandy flats associated with creosote scrub. Range is Sonoran desert from Coachella Valley south to Mexican border.	Marginal suitable habitat present but outside of known range.	Not expected to occur, therefore no effect on species.
<i>Thamnophis eques megalops</i> Northern Mexican gartersnake	US: FT	Found near permanent water sources and thick dense bank vegetation.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
BIRDS				
<i>Athene cunicularia</i> Burrowing owl	CDFW: SSC BLM: S	Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, margins of highways, golf courses, and airports. Resident over most of southern California (sparsely distributed over desert areas).	Suitable foraging habitat present. Not observed during focused surveys. No suitable burrows observed.	Potential to occur. Not observed during site visits.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	US: Threatened CA: SE BLM: S (Nesting sites are protected.)	Riparian obligate species primarily with willow-cottonwood riparian forests, but other species occur in alder and box elder dominated riparian habitats	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Colaptes chrysoides</i> Gilded flicker	CA: SE	Mature saguaro cactus.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Icteria virens</i> Yellow-breasted chat	CDFW: SSC	Riparian willow thickets.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Ixobrychus exilis</i> Least bittern	CDFW: SSC	Freshwater and brackish marshes.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Laterallus jamaicensis coturniculus</i> California black rail	CA: ST	Tidal and freshwater marshes.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Melanerpes uropygialis</i> Gila woodpecker	CA: SE BLM: Sensitive	Cottonwood and other desert riparian. Cavity nester in riparian trees or saguaro cactus.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Micranthene whitneyi</i> Elf owl	CA: SE BLM: Sensitive	Cottonwood willow and mesquite riparian along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Myiarchus tyrannulus</i> Brown-crested flycatcher	CDFW: Watch list	Riparian thickets along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Piranga rubra</i> Summer tanager	CDFW: SSC	Occur along streams among willows, cottonwoods, mesquite, or saltcedar	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Pyrocephalus rubinus</i> Vermillion flycatcher	CDFW: SSC	Cottonwood, willow, mesquite and other desert riparian.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Rallus obsoletus yumanensis</i> Yuma Ridgway's rail	US: FE CA: ST, Fully protected	Fresh water marshes along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Toxostoma crissale</i> Crissal thrasher	CDFW: SSC	Desert riparian, dense vegetation along streams.	Suitable habitat is not present	Not expected to occur, therefore no effect on species.
<i>Vireo bellii arizonae</i> Arizona Bell's vireo	CA: SE BLM: S	Summer resident along Colorado River, willow thickets.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Setophaga petechia sonorana</i> Sonoran yellow warbler	CA: SSC	Summer resident of Colorado River, riparian, cottonwoods, willows.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
MAMMALS				
<i>Antrozous pallidus</i> Pallid bat	CDFW: SSC BLM: S	Deserts, grasslands, shrublands, woodlands and forests, in open dry habitat with rocky areas for roosting.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	CA: CT CDFW: SSC BLM: S USFS: S	Coniferous forests and woodlands, semi-desert and montane shrublands	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Chaetodipus penicillatus sobrinus</i> Desert pocket mouse	LCR MSHCP: Listed	Desert areas with coarse vermiculite soils and clumped brush habitat. Avoid open desert scrub areas due to lack of cover.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Lasiurus blossevillii</i> Western red bat	CA: SSC, Candidate	Desert riparian. Roosts in trees.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Lasiurus xanthinus</i> Western yellow bat	CA: SSC	Desert riparian. Roosts in trees.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Lontra Canadensis Sonora</i> Southwestern river otter	CA: SSC	Aquatic habitat along the Colorado River.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Macrotis californicus</i> California leaf- nosed bat	BLM: S CA: SSC	Foraging occurs in desert washes with mesquite, ironwood, Palo verde, catclaw, smoketree.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Ovis Canadensis nelson</i> Desert bighorn sheep	CDFW: Fully protected BLM: S	Open, steep rocky terrain.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Sigmodon arizonae plenus</i> Colorado River cotton rat	CDFW: SSC	Grass cattail habitat with developed herbaceous understory.	Suitable not habitat present.	Not expected to occur, therefore no effect on species.
<i>Sigmodon hispidus eremicus</i> Yuma Hispid cotton rat	CDFW: SSC	Backwater habitat along the Colorado River.	Suitable not habitat present.	Not expected to occur, therefore no effect on species.

Designations:

US: United States

CA: California

FE – Federally Endangered

FT – Federally Threatened

SE – State Endangered

ST – State Threatened

CT – Candidate Threatened

CDFW: SSC – Species of Special Concern

CDFW: FP – Fully Protected

CDFW: WL – Watch List

BLM: S – Sensitive

USFS: S – Sensitive

WBWG: M – Medium Priority

As stated above, burrowing owl has the potential to occur within the limits of the project and therefore have a potential to be impacted with the implementation of the proposed project. All other species aside from desert tortoise and burrowing owl are not further discussed beyond the extent of the table above because no impact is expected to them.

Desert tortoise (*Gopherus agassizii*) – (Federal: threatened; California: threatened). The proposed project site lies within the known range of the desert tortoise (DT). Therefore, focused protocol surveys to determine presence\absence were conducted. Mr. J. Wayne Johnson of Pacific BioScience Inc. Mr. Johnson conducted the survey on September 17, 2021. Mr. Johnson has extensive experience conducting desert tortoise surveys over the past twenty years for large and small projects including studies for military installations and linear projects such as the High Desert Corridor. No individuals or their sign were detected during surveys. Therefore, no impact to this species is expected. Although no individuals or their sign were observed, individuals could occur on the site in the future prior to clearing and grubbing. A focused protocol survey is required within one year prior to project initiation (clearing and grubbing). A focused protocol survey shall be conducted within one year of project initiation and during appropriate time of year by a qualified individual approved by California Department of Fish & Wildlife and U.S. Fish & Wildlife Service (Mitigation Measure 4.3). If individuals are noted in the future, U.S. Fish and Wildlife Service and California Department of Fish and Game shall be contacted

Pacific BioScience, Inc.

Riverlux Resort Initial Study and Mitigated Negative Declaration

Page 26

immediately for consultation prior to work commencing.

Burrowing owl (*Athene cunicularia*) – (Federal: None; California: Species of Special Concern). This species occurs in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. It is a subterranean nester that is dependent upon burrowing mammals, most notably the California ground squirrel. Marginal suitable habitat occurs on site. As such a cursory habitat assessment was conducted on September 17, 2021 by Mr. Jeff Johnson with Pacific BioScience, Inc. No suitable burrows were found on site or on adjacent parcels. Also, no individuals or their sign were observed during any site visit. Therefore, no impact to this species is expected. Although no individuals or their sign were observed, individuals could occur on the site in the future prior to clearing and grubbing. Pre-construction surveys shall be conducted (Mitigation Measure 4.4). If individuals are noted in the future, California Department of Fish and Game shall be contacted immediately for consultation prior to work commencing.

Small Mammals

Because suitable habitat doesn't occur onsite, the presence of special status small mammals is not expected to occur on-site.

Nesting Raptors and Other Birds

Suitable habitat for raptors and other birds protected by the Migratory Bird Treaty Act (MBTA) occurs within and adjacent to the project site. Due to the disturbed nature of this habitat the potential for nesting should be considered low to moderate for common wildlife adapted to urbanized environs. Most native breeding birds are protected under California Fish and Game Code Section 3503, and raptors specifically are protected under Section 3503.5. Additionally, California Fish and Game Code Section 3800 prohibits the taking of non-game birds and fully protected species. The nesting period for raptors and other birds generally occurs between February 15 and August 31. Construction activities that occur during the nesting season could disturb nesting sites for protected birds if construction occurs within 500 feet of an active nest for raptors and potentially less for other birds. Impacts to potential avian nesting habitat should be avoided, if possible. If avoidance is not possible, minimization measures will be necessary, including pre-construction nesting surveys. If no nests are found or if construction occurs during the non-breeding season (generally September 1 through February 14), no further action is warranted (Mitigation Measure 4.2).

Jurisdictional Resources

Prior to investigation, research was conducted using the USFWS National Wetlands Inventory and it noted an area at the southern boundary of the proposed project limits listed as "Freshwater Forested/Shrub Wetland". Based on this data, a jurisdictional determination and delineation was conducted focusing on this area. Results of this determination can be viewed in Appendix F and revealed that although signs of this feature were observed they were further south off the project site and wetland characteristics were not observed within the project limits. Wetland inventory maps are created with a broad-brush stroke hence the need for a field investigation to determine where the boundary exists (if any) on the site. The applicant has requested approval of this determination by CDFW and RWQCB.

The site was also evaluated to determine Army Corps of Engineers jurisdiction, if any, under the Section 404 of the Clean Water Act. As with State jurisdiction, determining ACOE jurisdiction can be challenging in the desert region. Characteristics used are: 1) presence of water, 2) soils, and 3) vegetation. When considering the potential for jurisdiction, connectivity to a traditional navigable waterway must be present. The Colorado River occurs approximately 800 feet to the north east. It was determined that ordinarily no water flow occurs off the site and enters the Colorado River. Surface runoff from the site ordinarily percolates through the ground and does not reach the Colorado River. Pacific BioScience, Inc. understands that typically larger episodic drainages with ordinary water flow and obvious connectivity to the Colorado River should be jurisdictional as well as all areas directly adjacent to the river that experience periodic flooding. Features on the project site do not meet these criteria.

Analysis:

- a) **Finding:** The proposed project will have a potentially significant impact either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

However, Mitigation Measures 4.1, 4.2, 4.3, and 4.4 would ensure that impacts would remain less than significant.

Discussion: The proposed project site has natural vegetation with open space on adjacent parcels. As such, potential exists for several special-status species known to occur within the vicinity to occur on the site. Although focused surveys were conducted, and no special-status species were detected, potential exists for wildlife to occur on site in the future. Pre-construction surveys (Mitigation Measures 4.1-4.4) are required to reduce the potential for impacting a special-status species should it occur on the site at the time of clearing and grubbing.

- b) Finding: The proposed project will not have a potentially significant impact on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

Discussion: No jurisdictional resources were found onsite and therefore no impact will occur. This determination is pending approval from CDFW and RWQCB.

- c) Finding: The proposed project will not have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Therefore, the project will have No Impact to wetlands.

Discussion: There are no federally protected wetlands as defined by Section 404 of the Clean Water Act that exist on the project site (USFWS 2020), nor would any wetlands be affected indirectly by the project's activities.

- d) Finding: The proposed project will have a potentially significant impact on the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites unless mitigation is incorporated. However, Mitigation Measures 4.2, 4.3, and 4.4 would ensure that impacts would remain less than significant.

Discussion: The proposed project site has natural vegetation with open space occurring on adjacent parcels. As such, potential exists for nesting birds to occur on the project site or adjacent parcels. If possible, construction should occur between September 1 and February 14 to avoid the nesting bird season. If clearing and grubbing must start during the nesting bird season (February 15–August 31), then a pre-construction survey must be completed by a qualified biologist to survey for active nests on the project site and within a 300-foot buffer (500-foot buffer for raptor species) surrounding the project (Mitigation Measure 4.2). This survey must be performed no more than three days prior to start of initial clearing and grubbing. If nests are discovered, a qualified biologist shall establish an appropriate buffer around the active nest that shall remain in place until the nest is determined to be inactive.

- e) Finding: The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. There will be No Impact with regard to local ordinances or policies protecting biological resources.

Discussion: There is no applicable local policy or ordinance protecting biological resources that will be in conflict with any phase of the project.

- f) Finding: The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There will be no impact to any existing conservation plan.

Discussion: The proposed project does not present a conflict with an adopted Habitat Conservation Plan (Lower Colorado River Multi-Species Conservation Plan), Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Applicant Proposed Operating Restrictions: None.

Mitigation:

Mitigation Measure 4.1: A focused plant survey will be conducted prior to construction during the appropriate growing season to identify any special-status desert dwelling plants that have the potential for occurring on the proposed project site.

Mitigation Measure 4.2: If work must be completed during the nesting bird season (February 15–August 31), then a pre-construction survey must be completed by a qualified biologist to survey for active bird nests on the project site within the project footprint and in a 300-foot buffer (500-foot buffer for raptor species) surrounding the project. This survey must occur no more than three days prior to when construction begins. If nests are discovered, a qualified biologist shall establish a species appropriate buffer around the nest that shall remain in place until the nest is determined by a qualified biologist to be inactive.

Mitigation Measure 4.3: A qualified biologist shall survey for desert tortoise prior to construction. In the event an individual is found, the qualified biologist shall capture and relocate to a designated area approved by USFWS and CDFW.

Mitigation Measure 4.4: A qualified biologist shall survey for burrowing owl prior to construction. In the event burrowing owl or their sign is observed during pre-construction surveys, the applicant will consult with CDFW prior to clearing and grubbing activities.

5. CULTURAL RESOURCES

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Setting:

According to the California Public Resources Code Section 21084, a project may have a significant effect on the environment if the project “may cause a substantial adverse change in the significance of a historical resource.” Tribal cultural resources are discussed separately in the Tribal Cultural Resources section.

Pacific BioScience, Inc. conducted research on cultural resources within a two-mile area of the project site. The records search identified four previously recorded sites and ten studies within a two-mile buffer of the site. Three of these sites are historical, and one is Native American in origin with pottery shard scatter. No sites or studies are recorded within the project site. The four previously recorded sites are summarized in Table 3 below.

The closest known historical resource under CEQA is the El Garces Hotel which is 0.5 miles away to the south.

Site No.	Description	Eligibility
Primary: P-36-000985	Pottery shard scatter.	
Primary: P-36-002910	This site is a segment of the Historic U.S. Route 66.	Eligible (2S2)
Primary: P-36-002904	This site is a historic glass scatter of artifacts appearing to date from 1880s through 1919.	
Primary: P-36-019765	This site is the National Register listed former Needles Atchison Topeka and Santa Fe Depot, currently El Garces.	Listed (1S)

Analysis:

- a) **Finding:** The project is highly unlikely to cause a substantial adverse change in the significance of a historical resource as defined in §15064.5. Impacts would be considered less than significant.

Discussion: The cultural resources inventory did not identify any historical resources on the project site. It is unlikely that the project will result in a substantial adverse change in the significance of a historical resource and the impact is determined to be Less than Significant.

- b) **Finding:** The project is unlikely to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064. Impacts would remain less than significant with incorporation of Mitigation Measure 5.1.

Discussion: The records search did not identify any historical resources within the proposed project area and it does not meet the criteria of an archeological site. Based on these findings, it is unlikely that the project will result in a substantial adverse change in the significance of an archaeological resource, and the impact is considered to be Less than Significant with Mitigation. Mitigation Measure 5.1 should be implemented that includes a qualified archeologist/paleontologist to be on-site during all grading activities.

- c) **Finding:** The project is unlikely to disturb any human remains, including those interred outside of dedicated cemeteries. Impacts would be less than significant with incorporation of Mitigation Measure 5.2.

Discussion: The records search did not identify any historical or archaeological resources on the project site. Based on historic aerial imagery and historic topographic maps, the proposed project site does not appear to have been historically used as a cemetery. It is unlikely that the project will disturb any human remains, including those buried outside of formal cemeteries. Ground disturbance will not be to a large depth. However, in accordance with State of California Public Resources Health and Safety Code Section 7050.5 through 7055, should there be an inadvertent discovery of human remains, no further excavation will occur and work will cease. At this time, the City Coroner will be contacted and make a determination on the unearthed remains. If the remains determined by the coroner are not subject to his or her authority, and are believed to be those of a Native American, the Native American Heritage Commission will be contacted and appropriate course of action will be determined.

Applicant Proposed Operating Restrictions: None.

Mitigation:

Mitigation Measure 5.1: During the initial construction phase involving grading and earthwork activities, a qualified archaeological and paleontological monitor shall be present on-site. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological significance, the qualified monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, faunal bones, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

Mitigation Measure 5.2: To minimize the potential for any adverse impacts to tribal cultural resources, the City of Needles requires a tribal cultural monitor to be on site during the ground-disturbance phases of the project. The applicant will coordinate the services of a tribal monitor with the Twenty-Nine Palms Band of Mission Indians, Morongo Band of Mission Indians, Fort Mojave Indian Tribe, Colorado River Indian Tribes, and Torres Martinez Desert Cahuilla Indians.

6. ENERGY

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Setting:

The proposed project will result in the construction of 58 single-family townhomes. LED lights throughout the development will be installed to reduced power consumption and drought tolerant plants will be used in the landscape mix within the development to reduce excessive water use.

Analysis:

- a) **Finding:** The proposed project is unlikely to cause a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Impacts would be considered less than significant.

Discussion: Construction contractors would be required to comply with the provisions of 13 California Code of Regulations Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, which would minimize unnecessary fuel consumption. Construction equipment would be subject to the U.S. EPA Construction Equipment Fuel Efficiency Standard (40 Code of Federal Regulations Parts 1039, 1065, and 1068), which would minimize inefficient fuel consumption. Electrical power would be consumed during construction activities, and the demand, to the extent required, would be supplied from existing electrical infrastructure in the area.

Overall, construction activities would utilize fuel-efficient equipment consistent with state and federal regulations and would comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. Construction contractors would not be anticipated to utilize fuel in a manner that is wasteful or unnecessary as a business practice to ensure cost efficiency. Therefore, project construction would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

Energy demand from operation of project development would include fuel consumed by passenger vehicles; natural gas consumed for heating and cooking in residential buildings; and electricity consumed by new residences including, but not limited to lighting, water conveyance, and air conditioning. The annual energy demand for the proposed project after full build out has been calculated to be 1371 megawatts and the City of Needles has confirmed it has the capacity. LED lighting will be the primary source of exterior lighting. LED lighting provides very efficient production of light, allows for directed light to only areas where it is needed and uses less electricity than other lighting sources. Landscaping around the development perimeter will include drought tolerant plants which will reduce water consumption. Implementation of the energy efficient lighting and reduced water consumption for landscaping will limit the energy consumption necessary for operation of the proposed residential uses. As a result, energy consumption resulting from the proposed built environment would not be wasteful, inefficient, or unnecessary, and this impact would be less than significant.

- b) **Finding:** The proposed project will not obstruct a state or local plan for renewable energy or energy efficiency.

There would be no impact.

Discussion: There is no approved local plan for renewable energy within the vicinity. As stated above, the proposed project will utilize energy efficient operations.

7. GEOLOGY AND SOILS.

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
<ul style="list-style-type: none"> Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? 	☐	☐	☐	☒
<ul style="list-style-type: none"> Strong seismic ground shaking? 	☐	☐	☒	☐
<ul style="list-style-type: none"> Seismic-related ground failure, including liquefaction? 	☐	☐	☐	☒
<ul style="list-style-type: none"> Landslides? 	☐	☐	☐	☒
Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Setting:

According to the most current maps prepared by the State Geologist and the California Geologic Survey (Divisions of Mines and Geology 2020), the proposed project is not located within an Alquist-Priolo Earthquake Fault Zone. Additionally, the proposed project location is not identified on the County of San Bernardino Geological Hazards Surface Mining and Reclamation Act (SMARA) Overlay Map as in the area of an earthquake fault, or in an area subject to liquefaction, landslide, or collapse (San Bernardino County 2021).

A custom soil report was produced for the proposed project area using the web tool provided by the United States Department of Agriculture Natural Resources Conservation Service. No data was available for the proposed project area or areas immediately surrounding (NRCS 2021).

Analysis:

- a) **Finding:** The proposed project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault. There will be No Impact regarding exposure of people or structures to adverse effects from a known earthquake fault.

Discussion: According to the most current maps prepared by the State Geologist and the California Geologic Survey, the proposed project is not located within an Alquist-Priolo Earthquake Fault Zone and is not identified as in proximity to an earthquake fault on the County of San Bernardino Geologic Hazards SMARA Overlay Map.

- b) **Finding:** The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. With adherence to regulatory requirements of the International Building Code standards, the proposed project will have a Less than Significant Impact regarding exposure of

people or structures to adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Discussion: As stated above, the proposed project is not located within an Alquist-Priolo Earthquake Fault Zone. However, earthquakes that occur along fault zones still contribute to seismic ground shaking in areas throughout Southern California. As such, all proposed structures will comply with International Building Code standards so as to minimize any potential impacts resulting from ground-shaking during an earthquake. The proposed project is not located within a mapped earthquake fault zone and the construction and design of residential units will comply with all International Building Code standards.

- c) Finding: The proposed project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. The proposed project would have No Impact to exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Discussion: As discussed above, the proposed project area is as not in the vicinity of an earthquake fault, and not in an area subject to liquefaction. The climate of Needles is dry, which receives less than six inches of rainfall annually, and no saturated soils are found within or adjacent to the proposed project area.

- d) Finding: The proposed project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. There will be No Impact from landslides.

Discussion: The proposed project area is not located in an area that is susceptible to landslides. The project site is level and at grade with surrounding parcels.

- e) Finding: The project will not result in substantial soil erosion or the loss of topsoil. Impacts would be considered less than significant.

Discussion: The proposed project is considered flat, and although earthmoving will occur to construct the proposed development, there is unlikely to be substantial soil erosion or loss of topsoil. Implementation of operating restriction GS-1 will prevent wind erosion. Additionally, long-term wind erosion will be reduced or eliminated by the use of native plantings installed on-site.

- f) Finding: The project will not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. There will be No Impact with regard to soil stability.

Discussion: As discussed above, the proposed project is not located on a geologic unit or soil that is unstable or subject to lateral spreading or subsidence liquefaction or collapse.

- g) Finding: The proposed project will not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. Therefore, no impacts regarding expansive soils and their risks to life or property are expected to occur.

Discussion: The proposed project is not located in an area with expansive soils. These types of soils require a high clay content, of which is not present within the proposed project area, nor do they exist within this desert region.

- h) Finding: The project will not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. Therefore, No Impact from septic tanks or alternative waste water systems are expected to occur.

Discussion: The proposed development will connect with the city sewer system and there will be no need for septic tanks or alternative waste water systems on site.

- i) **Finding:** The project is highly unlikely to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Impacts would be considered less than significant.

Discussion: Based on the type of construction, ground disturbance is unlikely to be at a depth greater than 12 inches. There is a very low risk that paleontological resources will be encountered. Based on this, it is unlikely that the project will result in a substantial adverse change in the significance of a paleontological resource. However, Mitigation Measure 5.1 will be implemented to have a qualified paleontological monitor onsite in the event any paleontological resource is unearthed during ground disturbing activities.

Applicant Proposed Operating Restrictions:

GS-1: During short-term construction activities, all exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered twice daily for soil retention and dust suppression when construction activities are occurring on-site.

Mitigation:

Mitigation Measure 5.1: During the initial construction phase involving grading and earthwork activities, a qualified archaeological and paleontological monitor shall be present on-site. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological significance, the qualified monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, faunal bones, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

8. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Setting:

In 2006 the State of California enacted the Global Warming Solutions Act of 2006 which required the state to establish a greenhouse gas (GHG) emissions cap for 2020 based on 1990 emissions. The act also required mandatory reporting rules for significant sources of GHG emissions. GHG emissions in the project area are regulated by the MQAQMD, which has developed daily and annual thresholds of significance for these emissions.

Emission Calculations and Significance Threshold – For the purposes of determining whether or not GHG emissions from affected projects are significant, project emissions will include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Construction emissions will be amortized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier. The following bullet points describe the basic structure of staff's tiered GHG significance threshold proposal for stationary sources.

- Tier 1 – consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. For example, SB 97 specifically exempts a limited number of projects until it expires in 2010. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, then it would move to the next tier.
- Tier 2 – consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines §§15064(h)(3), 15125(d), or 15152(a). The GHG reduction plan must, at a minimum, comply with AB 32 GHG reduction goals; include emissions estimates agreed upon by either CARB or the AQMD, have been analyzed under CEQA, and have a certified Final CEQA document. Further, the GHG reduction plan must include a GHG emissions inventory tracking mechanism; process to monitor progress in achieving GHG emission reduction targets, and a commitment to remedy the excess emissions if GHG reduction goals are not met (enforcement). If the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If the project is not consistent with a local GHG reduction plan, there is no approved plan, or the GHG reduction plan does not include all of the components described above, the project would move to Tier 3.
- Tier 3 – establishes a screening significance threshold level to determine significance using a 90 percent emission capture rate approach as described above. The 90 percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the following methodology. Using AQMD's Annual Emission Reporting (AER) Program staff compiled reported annual natural gas consumption for 1,297 permitted facilities for 2006 through 2007 and rank-ordered the facilities to estimate the 90th percentile of the cumulative natural gas usage for all permitted facilities. Approximately 10 percent of facilities evaluated comprise more than 90 percent of the total natural gas consumption, which corresponds to 10,000 metric tons of CO₂ equivalent emissions per year (MTCO₂eq/yr) (the majority of combustions emissions is comprised of CO₂). This value represents a boiler with a rating of approximately 27 million British thermal units per hour (mmBtu/hour) of heat input, operating at a 80 percent capacity factor. It should be noted that this analysis did not include other possible GHG pollutants such as methane, N₂O; a life-cycle analysis; mobile sources; or indirect electricity consumption. Therefore, when implemented, staff's recommended interim proposal is expected to capture more than 90 percent of GHG emissions from stationary source projects. If the project exceeds the GHG screening significance threshold level and GHG emissions cannot be mitigated to less than the screening level, the project would move to Tier 4.
- Tier 4 – consists of a decision tree approach that allows the lead agency to choose one of three compliance options based on performance standards. (For the purposes of Board consideration, Tier 4 is not recommended for approval at this time.). The purpose of Tier 4 is to provide a means of determining significance relative to GHG emissions for very large projects that

include design features and or other measures to mitigate GHG emissions to the maximum extent feasible, but residual GHG emissions still exceed the interim Tier 3 screening levels. In this situation, since no additional project-related GHG emission reductions are feasible, staff is considering whether it is reasonable to consider that residual emissions are not significant. The intent of the Tier 4 compliance options is to encourage large projects to implement the maximum feasible GHG reduction measures instead of shifting to multiple smaller projects that may forego some design efficiencies that can more easily be incorporated into large projects than small projects. CARB's interim GHG significance threshold proposal incorporates a similar, but modified approach for determining GHG significance along with other suggested approaches that may have merit to consider and incorporate into AQMD staff's recommended interim proposal. There are also policy and legal questions that need to be further resolved before adopting such an approach.

- Tier 5 – under this tier, the project proponent would implement offsite mitigation (GHG reduction projects) to reduce GHG emission impacts to less than the proposed screening level. Any offsite mitigation measures that include purchase of offsets would require the project proponent provide offsets for the life of the project, which is defined as 30 years. If the project proponent is unable to implement offsite GHG reduction mitigation measures to reduce GHG emission impacts to less than the screening level, then GHG emissions from the project would be considered significant. Since it is currently uncertain how offsite mitigation measures, including purchased offsets, interact with future AB 32 Scoping Plan measures, the AQMD would allow substitution of mitigation measures that include an enforceable commitment to provide mitigation prior to the occurrence of emissions. The intent of this provision is to prevent mitigating the same emissions twice.

Residential/Commercial Sectors GHG Significance Threshold – To achieve the same policy objective of capturing 90 percent of GHG emissions from new development projects in the residential/commercial sectors and implement a “fair share” approach to reducing emission increases from each sector, staff discussed with the working group a proposal combining performance standards and screening thresholds. The performance standards primarily focus on energy efficiency measures beyond Title 24 and a screening level of 3,000 MTCO₂eq/yr based on the relative GHG emissions contribution between residential/commercial sectors and stationary source (industrial) sectors.

Equipment used during construction will be compliant with Tier 4 requirements and therefore meets emission EPA and AQMD emission standards for all pollutants.

Analysis:

- a) Finding: The proposed project will not generate GHG emissions, either directly or indirectly, that will have a significant effect on the environment. The project is determined to have a Less than Significant Impact in regard to either direct or indirect generation of GHG emissions.

Discussion: The proposed project can be broken into two phases: construction and operation. During the construction phase, there is the potential for GHG emissions from equipment and vehicles used during this phase. However, the emissions generated will be minor and incremental given the scale of the project and the limited period of construction. The GHG emissions calculated after running the CalEEMod analysis has determined that the proposed project will not exceed GHG emission thresholds (See Appendix C). In addition, emissions generated will be low with the implementation of GGE-1, wherein equipment used during construction will be compliant with Tier 4 requirements.

Operation of on-site development would consume both electricity and natural gas and include emissions from energy consumption and natural gas, waste generation, and water and wastewater conveyance. The project will result in an incremental amount of indirect GHG emissions due to the estimated 1371 MW power usage for residences. In any case, the total CO₂ emissions are still far below the threshold of significance for the MDAQMD.

- b) Finding: The project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. The proposed project would have No Impact.

Discussion: The project proposes to construct a residential development.

For the purposes of this analysis, the proposed project was evaluated against the following applicable plans, policies, and regulations:

MDAQMD—the CEQA and Federal Conformity Guidelines contain thresholds of significance for GHG

emissions. As described above, project emissions will be far below the threshold of significance adopted in the plan as seen in the CalEEMod analysis in Appendix C.

As reporting of emissions is required for electricity suppliers pursuant to the Mandatory Greenhouse Gas Reporting Program as part of meeting the reduction goals set for California, it is reasonable to determine that emissions due to the electrical demand of the project will continue to be regulated in line with state goals.

The project will therefore not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

Applicant Proposed Operating Restrictions:

GGE-1: Equipment used during construction will be compliant with Tier 4 Emission Standards under Environmental Protection Agency (EPA) rule.

Mitigation: None required.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Setting:

The proposed project site contains desert scrub and plants that indicate this area has not been developed and there are no records of development. The proposed project site does not currently contain any hazardous materials or known hazards. An analysis of the proposed project site did not identify any mapped spill or cleanup sites within or immediately adjacent to the project area.

Analysis:

- a) Finding: The proposed project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, there is No Impact as no exposure of the public or environment to hazardous materials is expected to occur.

Discussion: The proposed project will not require the transport, use, or disposal of hazardous materials. Therefore, there is No Impact.

- b) Finding: The proposed project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The proposed project would have No Impact.

Discussion: No volatile chemicals, pesticides or other materials that would pose a hazard to human health or to the environment will be used for construction or landscaping purposes.

- c) Finding: The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No Impact in regard to hazardous emissions and handling of hazardous materials near a school.

Discussion: The proposed project site is 0.58 miles from the nearest school (Needles High School) and will not involve any hazardous emissions or materials.

- d) Finding: The proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, does not create a significant hazard to the public or the environment. No Impact on any hazardous materials site which could be a potential hazard to the public or the environment.

Discussion: The proposed project does not contain any hazardous materials on site, and is not identified as being a hazardous material site.

- e) Finding: The proposed project is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. No Impact will occur.

Discussion: The proposed project is not located within an airport land use plan or within two miles of an airport. The closest airport to the proposed project site is Eagle Airpark, which is located approximately 2.5 miles to the north from the proposed project site. The next closest airport is Needles Airport, which is located approximately 5.5 miles south of the project site. The project will not result in safety hazards to people working or residing within an airport land use area.

- f) Finding: The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No Impact will occur.

Discussion: The proposed project has adequate emergency access from North K Street, Needles Hwy, and River Road. Additionally, the proposed project will not impede emergency response routes to the surrounding area.

- g) Finding: The proposed project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. No Impact will occur.

Discussion: The proposed project is located in an urbanized area of the City of Needles that is not adjacent to wildlands. After review of the CalFire hazard map for San Bernardino County, the proposed project is not within any mapped moderate, high or very-high fire hazard zones.

Applicant Proposed Operating Restrictions: None required.

Mitigation: None required.

10. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
I) result in a substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
II) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
IV) impede or redirect flood flows?	☐	☐	☒	☐
In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Setting:

The proposed development will be served by water supplied by the City of Needles. The operational water needs are 0.32 gallons per minute (gpm) per household, and with 58 homes this equates to 18.56 gpm for the entire development after full build-out. The City of Needles has provided a “will serve” letter to project ownership for the amount of water requested by the development and can be viewed in Appendix K: City of Needles – Will Serve Letters. The groundwater well the City uses for the water source has sufficient capacity to meet the needs of the proposed project.

The proposed project will construct storm drains and detention basins onsite to collect water from rain events that will connect to the City’s sewer system.

The City of Needles is located in San Bernardino County Flood Control District, Zone 6. As mapped by the Federal Emergency Management Agency (FEMA), the project site is predominately within Zone AO (Regulatory Floodway) and small portion of the project site occurs within flood Zone X (area of minimal flood hazard) (FEMA 2022).

Analysis:

- a) **Finding:** The proposed project is highly unlikely to violate any water quality standards or waste discharge requirements. With incorporation of operating restriction HWQ-1, the proposed project will have a Less than Significant Impact on violating any water quality standards or waste discharge requirements.

Discussion: As part of the project design, infiltration basins strategically located within the project limits will be constructed to capture water flow and recharge groundwater.

- b) **Finding:** The proposed project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support

existing land uses or planned uses for which permits have been granted). The project will have a Less Than Significant Impact to groundwater supplies and will not substantially deplete groundwater supplies or lower the local groundwater table.

Discussion: . The operational water needs are 0.32 gallons per minute (gpm) per household, and with 58 homes this equates to 18.56 gpm for the entire development after full build-out. The City of Needles has provided a “will serve” letter to project ownership for the amount of water requested by the development and can be viewed in Appendix K: City of Needles – Will Serve Letters. The groundwater well the City uses for the water source has sufficient capacity to meet the needs of the proposed project. Additionally, the proposed project will construct three infiltration basins located within the project limits to capture water flow and recharge groundwater.

- ci) Finding: The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in a substantial erosion or siltation on- or off- site. Impacts would be considered less than significant.

Discussion: The proposed project is 14 acres in size and relatively flat. No jurisdictional resources were observed within the project area. A study of existing hydrology flow conditions was conducted by RAAB Engineering (Appendix G). Based on the existing flow patterns, a plan was created to accept flow and detention basins were strategically designed based on these calculations and are located throughout the proposed development. Since the development will result in the construction of impermeable surfaces, these detention basins will be constructed to collect and facilitate flow that accrues onsite from storm events. These features have been included to offset the removal of permeable surfaces that are found onsite and facilitate flow so as not to result in any erosion or siltation on- and off- site.

- cii) Finding: The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. Impacts would be considered less than significant.

Discussion: The proposed project is 14 acres in size and relatively flat. No jurisdictional resources were observed within the project area. A study of existing hydrology flow conditions was conducted by RAAB Engineering (Appendix G). Based on the existing flow patterns, a plan was created to accept flow and detention basins were strategically designed based on these calculations and are located throughout the proposed development. Since the development will result in the construction of impermeable surfaces, these detention basins will be constructed to collect and facilitate flow that accrues onsite from storm events. These features have been included to offset the removal of permeable surfaces that are found onsite and facilitate flow so as not to result in any flooding on- or offsite.

- ciii) Finding: The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be considered less than significant.

Discussion: The proposed project is 14 acres in size and relatively flat. No jurisdictional resources were observed within the project area. A study of existing hydrology flow conditions was conducted by RAAB Engineering (Appendix G). Based on the existing flow patterns, a plan was created to accept flow and detention basins were strategically designed based on these calculations and are located throughout the proposed development. Since the development will result in the construction of impermeable surfaces, these detention basins will be constructed to collect and facilitate flow that accrues onsite from storm events. These features have been included to offset the removal of permeable surfaces that are found onsite and facilitate flow and will be connected to the City’s storm drain system. Communications with City representatives have confirmed that the connection to the City’s storm drain system has adequate capacity of anticipated run-off from the proposed project.

- civ) Finding: The proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, impede or redirect flood flows? Impacts would be considered less than significant.

Discussion: The proposed project is 14 acres in size and relatively flat. No jurisdictional resources were observed within the project area. A study of existing hydrology flow conditions was conducted by RAAB Engineering (Appendix G). Based on the existing flow patterns, a plan was created to accept flow and detention basins were strategically designed based on these calculations and are located throughout the proposed development. Since the development will result in the construction of impermeable surfaces, these detention basins will be constructed to collect and facilitate flow that accrues onsite from storm events. These features have been included to offset the removal of permeable surfaces that are found onsite and facilitate flow.

- d) Finding: The proposed project will not be in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. Impacts are considered to be less than significant.

Discussion: The project site is predominately within Zone AO (Regulatory Floodway) and small portion of the project site occurs within flood Zone X (area of minimal flood hazard) (FEMA 2022). Although the proposed project is considered to be in an area of minimal flood hazard, proper elevations for foundations were determined in the hydrology study (Appendix G). Elevations of all proposed structures have been modified appropriately to address flooding concerns. Additionally, the proposed project is not located in an area subject to tsunamis or within a seiche zone.

- e) Finding: The proposed project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts are considered to be less than significant.

Discussion: The proposed project will comply with all requirements of the City of Needles Municipal Code related to water quality, and the City's Stormwater Management Plan. Due to the increase in impervious surfaces, the proposed project would be required to implement, post-construction BMPs to mitigate stormwater pollution after full build-out.

Applicant Proposed Operation Restrictions: None required.

Mitigation: None required.

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11. LAND USE AND PLANNING

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Physically divide an established community?	☐	☐	☐	☒
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Setting:

The proposed project will require a general plan amendment to change the existing land use designation to Commercial Resort. The proposed project site is currently zoned CRR (Commercial, Residential, Resort), C-2 (General Commercial), and R-3 (Multiple Family Residential). The proposed project will require a general plan amendment to change the existing zoning to PUD. At present the City is updating its Land Use Element, combining its land use and zoning designations. The proposed project site is anticipated to have a zoning designation of PUD and C-2 at the time of project construction.

Analysis:

- a) Finding: The proposed project will not physically divide an established community. The proposed project will have No Impact regarding the potential to physically divide an established community.

Discussion: The proposed project site is 14 acres in size, located within a developed area of the City of Needles, and the development of the area will not introduce any sort of divide in the community. Additionally, no structure on the proposed development will be greater than 35 feet, and thus will not cause a visual divide amongst the surrounding area.

- b) Finding: The proposed project will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be considered less than significant.

Discussion: Based on this analysis, the proposed project is not determined to conflict with any applicable land use plan, as it is contingent upon a change in designated land used, and there is sufficient basis for the general plan amendment.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

12. MINERAL RESOURCES

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Potentially Significant Less Than	No Impact
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Setting:

The proposed project site is not located in an area zoned for mining or for mineral resource extraction (San Bernardino County 2007). The closest known mineral resource is located at 5163 National Trails Highway; an excavation business which specializes in aggregate base and rock. This establishment is approximately 1.8 miles away from the proposed project site.

Additionally, there are potential mineral resources located in the Eagle Pass area, more than four miles from the proposed project site, and an established mineral resource known as the Needles magnesite deposit is located west of Eagle Peak, which lies more than 8.0 miles away from the project site (Division of Mines and Geology 1985).

Analysis:

- a) Finding: The proposed project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. The proposed project will have No Impact on regarding the loss of availability of a known mineral resource.

Discussion: The proposed project location is not zoned for mineral resource extraction. Additionally, the nearest mapped mineral deposits are more than eight miles away from the proposed project location.

- b) Finding: The proposed project will not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed project will result in No Impact to the loss of availability of a locally-important mineral resource recovery site.

Discussion: The proposed project site is not located within a mineral resource recovery site as delineated on the City of Needles General Plan or the County of San Bernardino's General Plan.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

13. NOISE

Would the project result in:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Setting:

The Needles City Code noise standards require developments shall be designed to achieve a community noise equivalent level not to exceed 65 dB. The proposed project is located in an urbanized area within the City of Needles that is adjacent to residential and commercial lots. Noise generated from ongoing operational activities is limited to air conditioning units located the exteriors of residential units. Noise levels generated due to air conditioning units are expected to be at or below 45 dB at the source and below 45 dB at the perimeter fence based on manufacturer specifications. Noise generated from construction equipment is expected to be loud at times with the loudest equipment potentially reaching as high as dBA 91. Several operational restrictions will be implemented to reduce potential noise impacts during construction.

Analysis:

- a) Finding: The proposed project will potentially generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. With incorporation of Mitigation Measures 13.1 and 13.2, impacts would be less than significant.

Discussion: The Environmental Protection Agency (EPA) has general recommendations for noise standards that reasonably prevent nuisance and allow for speech intelligibility. The typical levels are expressed in day-night noise levels (L_{dn}), which is the average sound level in decibels during a 24-hour period with a 10-dBA weighting applied to noise generated during nighttime hours. The EPA recommends an indoor L_{dn} of 45 dBA and an outdoor L_{dn} of 55 dBA (EPA 1974).

A baseline noise study was conducted to determine existing ambient noise levels for both short- and long-term conditions. Given the specifications for noise generated equipment it is not expected that resulting noise levels after construction would be a significant increase. Refer to the Noise Study in Appendix H for details.

Noise generated by the project would consist of short duration noise resulting from construction activities and long-term noise from on-site stationary sources and off-site traffic noise. Airborne noise dissipates with increasing distance from the noise source.

Construction Noise Levels

Construction noise, although temporary, can potentially affect nearby sensitive receptors, such as residences and commercial businesses closest to the project site. Project construction would require the use of heavy equipment that may be periodically audible at off-site locations. Received noise levels would fluctuate, depending on the construction activity, equipment type, and distance between noise source and receiver. Additionally, noise from construction equipment would vary dependent on the construction phase and the number and type of equipment at a location at any given time.

The nearest receptors to the project site are residential and commercial land uses located around the proposed project site and range between 25-130 feet from the closest distance to construction activity. The average distance from construction activities on the project site to these land uses is approximately 200 feet. Construction noise would attenuate with increased distance from the noise sources.

Construction noise levels were estimated for nearby receptors using the FHWA Roadway Construction Noise Model (RCNM). See Figure 4 within the Appendix H for receptor locations. The model indicates that the use of construction equipment such as excavators and graders could expose the residential uses located around the project site to worst case noise levels of 91.0 dBA L_{max}. Table 2 (Construction Noise Impacts) below summarizes the maximum noise levels at each of the studied receivers. Pursuant to the Needles Municipal Code, a noise level of 65 dBA is allowable for residential land uses. Although construction noise would be higher than the ambient noise in the project vicinity, construction noise is naturally short-term and would cease to occur once project construction is complete and is therefore considered a less than significant impact with implementation of Mitigation Measures N-1. Additionally, the distance from receptor to construction activity ranged between 25-130 feet when using the RCNM software; however, the average distance from construction activities on the project site to these receptors is approximately 200 feet. Construction noise would attenuate with increased distance from the noise sources. Mitigation Measure N-1 has been incorporated to minimize general construction noise impacts to residential and commercial uses to the north, east, south, and west.

Table 2: Construction Noise Impacts

Receptor	Grading/Construction (dBA L_{max})	Noise Threshold Levels (dBA)
1 – Residential	85.0	65.0
2 – Commercial	85.0	70.0
3 – Residential	91.0	65.0
4 – Residential	85.0	65.0
5 – Residential	76.7	65.0
6 – Commercial	85.0	70.0

Operational Noise Levels

A substantial increase in ambient noise is an increase that is barely perceptible (3 dBA). Operationally, the proposed project will result in occasional noise generating activities such as conversation and vehicle noise. These activities are common in residential areas and do not represent a substantial increase in periodic noise in consideration that the proposed project location is surrounded to the north, east, and west by residential and commercial use.

The proposed project will not result in increases in traffic noise that will cause noise standards to be exceeded. Therefore, no substantial impacts will result. In addition, increases in traffic due to the proposed project will not result in a perceptible noise increase at any of the studied roadway segments. No substantial impacts will occur.

- b) **Finding:** The proposed project will not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Impacts would be considered less than significant.

Discussion: The proposed project will not result in any generation of excessive amounts of groundbourne vibration or groundbourne noise levels during construction of the facilities. A baseline noise study was conducted to determine existing ambient noise levels for both short- and long-term conditions. Given the specifications for noise generated equipment it is not expected that resulting noise levels after construction would be a significant increase. Refer to the Noise Study in Appendix H for details.

- c) **Finding:** The proposed project is not located within an airport land use plan or within two miles of a public airport or public use airport and will expose people residing or working in the proposed project area to excessive noise levels. There would be No Impact.

Discussion: The proposed project is not located within an airport land use plan or within two miles of a public airport or public-use airport. The closest airport to the proposed project site is Eagle Airpark, which is located approximately 2.5 miles to the north from the proposed project site. The next closest airport is Needles Airport, which is located approximately 5.5 miles south of the project site. The proposed project will not expose people working or residing within an airport land use area to excessive noise.

Applicant Proposed Operating Restrictions: None.

Mitigation:

Mitigation Measure 13.1: The applicant shall acknowledge that the noise generated by operation of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA L_{dn} . To ensure compliance, noise measurements will be taken post construction during residential use and will be submitted to the City of Needles. In the event that noise levels are exceeded, construction of sound walls to abate noise from residences or speed bumps to reduce vehicular traffic noise shall be proposed.

Mitigation Measure 13.2: The following shall apply to construction noise from tools and equipment:

- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory-approved muffler systems.

14. POPULATION AND HOUSING

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting:

The proposed project would result in 58 new residential units. The California Department of Finance (DOF) estimates an average occupancy rate of 2.55 persons per household in Needles (DOF, E-5, 2021). The current DOF population estimate for the City of Needles is 5,353. Total housing units for the City of Needles were estimated at 2,992 in 2016, with an estimated 4.9% homeowner vacancy rate (U.S. Census Bureau 2016).

Analysis:

- a) Finding: The proposed project will not induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure). The proposed project will have a Less Than Significant Impact to inducing substantial population growth.

Discussion: An increase in population is expected to occur with the introduction of new residences, however the amount is considered minimal when compared to the total population of the City of Needles. There will be 58 single family homes built with the implementation of the proposed project. At an average person per household of 2.55 for the City of Needles (DOF, E-5, 2021), this would result in 148 additional people.

Based on the model supplied by SCAG through the RTP/SCS Final Growth Forecast by Jurisdiction document, the City of Needles is projected to have a population of 6800 by 2035. The proposed project would create new housing in order to accommodate the projected population increase. Therefore, the proposed project would not result in a substantial population growth outside of the forecasted population for the City of Needles.

- b) Finding: The proposed project will not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. There will be No Impact.

Discussion: The proposed project is located on an undeveloped parcel and will not displace housing units or people.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

15. PUBLIC SERVICES

Would the project:				
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
• Fire protection?	☐	☐	☒	☐
• Police protection?	☐	☐	☐	☒
• Schools?	☐	☐	☒	☐
• Parks?	☐	☐	☐	☒
• Other public facilities?	☐	☐	☒	☐

Setting:

The San Bernardino County Fire Department serves the City of Needles under contract for fire protection services. Fire Station 32 serves the City of Needles and is located approximately 1.8 miles south from the proposed project site.

The San Bernardino County Sheriff's Department is contracted by the City of Needles for providing law enforcement Services and the nearest station is located approximately 1.0 mile southwest of the proposed project site.

Most schools in the Needles area are part of the Needles Unified School District. The closest school to the proposed project site is Needles High School and is approximately 0.58 miles away to the southwest.

The closest park in proximity to the proposed project is the Manny Morris Beach Side Park which is approximately 0.38 miles away to the east.

The Colorado River Medical Center is the closest full-service hospital and is approximately 1.0 miles away from the proposed project location to the southwest.

Analysis:

- a) **Finding:** The proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services for fire protection. Impacts to fire would be considered less than significant.

Discussion: The proposed project facilities will have wiring installed by a certified electrical contractor to the standards of the California Code of Regulations for commercial structures, and smoke/fire detection alarms will be installed to meet the California Code of Regulations. Additionally, the proposed project will adhere to all fire protection measures that were submitted on behalf of the San Bernardino County Fire Department, which can be viewed in Appendix I: Fire Condition Letter. Emergency responders will have access to the proposed project site via North K Street, River Road, and Needles Highway.

- b) **Finding:** The proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services for police protection. There will be no impact.

Discussion: The proposed project will be secured by a 6' concrete block wall and gates at points of entry. Security cameras will be placed at various strategic points around the development.

- c) Finding: The proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services related to schools. The proposed project will have a less than significant impact to schools and any public services related to schools.

Discussion: The proposed project site is located more than 1.1 miles from any school. Additionally, as discussed in Population and Housing above, there would be no substantial increase in population. There is potential to directly add students to schools located within the City of Needles. The applicant would be required to pay school impact fees pursuant to Section 65995 (3)(h) of the California Government Code (Senate Bill 50). This is considered a less than significant impact.

- d) Finding: The proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services for parks. The proposed project will have No Impact to parks or to the acceptable service ratios, response times, or other performance objectives for any of the public services for parks.

Discussion: The proposed project is located approximately 0.38 miles away from the nearest park. Additionally, as discussed in Population and Housing above, there would be no substantial increase in population.

- e) Finding: The proposed project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services for other public facilities. There will be no impact.

Discussion: The proposed project is located approximately 1.0 mile from the Colorado River Medical Center. The project does not propose hazardous activities and is not anticipated to place any extra demand on the community's medical services.

Applicant Proposed Operation Restrictions: None required.

Mitigation: None required.

16. RECREATION

	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting:

The City of Needles has approximately 40 acres of maintained grass and parkland, in addition to its 111-acre municipal golf course known as Rivers Edge Golf Course (City of Needles 2020). The closest park in proximity to the proposed project is the Manny Morris Beach Side Park which is approximately 0.38 miles away to the east.

Analysis:

- a) Finding: The proposed project will not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Impacts are considered to be less than significant.

Discussion: The proposed project will connect a pathway to the Rivers Edge Golf Course, which is a municipal golf course owned and operated by the City of Needles. The proposed project intends on provided access to the golf course for residents and this would increase its use. The golf course does not operate at full capacity and has the resources to accommodate an increase in members that utilize the facilities. Therefore, a substantial physical deterioration of the facility is not anticipated.

- b) Finding: The proposed project will not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No Impact.

Discussion: The proposed project does not include constructing or expanding existing recreational facilities.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

17. TRANSPORTATION

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Potentially Significant Impact	No Impact
Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☒	☐
Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
Result in inadequate emergency access?	☐	☐	☐	☒

Setting:

I-40 is the major highway through Needles, connecting Barstow to the west and Arizona to the east. The project is approximately 0.3 miles from I-40, although the nearest Interstate on-ramp or off-ramp is located approximately 0.5 miles away from the project. U.S. Route 95 also enters the city from the east on former Historic Route 66 concurrent with the I-40 freeway, then splits with Interstate 40 west of the city, as U.S. Route 95 heads north to Nevada (Caltrans 2016).

Local transit service to and within the Needles area is provided by Needles Area Transit. Amtrak provides daily service to Needles station, on the Southwest Chief route operating between Chicago and Los Angeles. The Needles airport is located south of the City, approximately 5.5 miles from the project site (Google Maps 2021).

Analysis:

- a) **Finding:** The project will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts would be less than significant.

Discussion: There will be multiple traffic ingress/egress to the proposed project development from North K Street, Needles Hwy, and River Road, which are existing roadways. Available traffic studies readily available from the Arizona Department of Transportation Traffic data for SR-95 at California State Line presents data that reveals traffic flow on SR-95 which is one block north of the proposed project area and it is operating well within capacity. The proposed project will be contributing approximately 124 vehicle trips per day, which includes the projected number of residents traveling to the development. Given the volume and capacity of SR-95, the impact of traffic on SR-95 is considered a Less than Significant impact to the existing transportation system within the vicinity of the proposed project site. There would be no impact to pedestrian and bicycle paths or mass transit.

- b) **Finding:** The project will not conflict with or be inconsistent with CEQA Guidelines § 15064.3 subdivision (b) regarding vehicle miles traveled. Impacts would be considered less than significant.

Discussion: A Vehicle Miles Traveled (VMT) Screening Evaluation was prepared by Urban Crossroads, Inc. for the proposed project and details can be viewed in Appendix J. The analysis concluded that based on applicable VMT screening thresholds, the proposed project meets the Low VMT Area screening. Additionally, the commercial retail component meets the Project Type Screening. The proposed project would therefore result in a less than significant VMT impact finding. No additional VMT analysis is required.

- c) **Finding:** The proposed project will not result in inadequate emergency access. No Impact.

Discussion: The proposed project is adjacent to Needles Hwy with adequate space and pathing for emergency access.

- d) **Finding:** The proposed project will not substantially increase hazards due to design features (e.g., sharp curves or

dangerous intersections) or incompatible uses (e.g., farm equipment). There will be no impact.

Discussion: All structures built within the proposed project site will comply with International Building Codes.

- e) Finding: The proposed project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. No Impact.

Discussion: The proposed project is not in conflict with the adopted policies regarding public transit, bicycle, or pedestrian facilities—including but not limited to the Circulation and Transportation Plan adopted by the City of Needles in the 1986 General Plan. The proposed project is not anticipated to decrease the performance or safety of nearby transportation features or facilities.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

18. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code §5020.1(k)?	☐	☐	☐	☒
Cause a substantial adverse change in the significance of a tribal cultural resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1?	☐	☒	☐	☐

Setting:

According to the California Public Resources Code Section 21084, a project may have a significant effect on the environment if the project “may cause a substantial adverse change in the significance of an historical resource.” Assembly Bill 52 (AB52) specifies that a project with the potential for adverse effects on tribal cultural resources may be considered a significant effect on the environment. The City of Needles, as the lead CEQA agency and as required by AB52, has consulted with the local Native American Tribes in the project area.

Tribes that are located regionally include the Fort Mojave Tribe, Colorado River Indian Tribe, Morongo Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, and the Twenty-Nine Palms Band of Mission Indians. Pacific BioScience, Inc understands that the City of Needles communicates with the tribe regarding projects on a regular and frequent basis. A letter was submitted by Pacific BioScience, Inc. to the Native American Heritage Commission (NAHC) Sacred Lands File & Native American Contacts List to perform a Sacred Lands File search on 8/16/22. At this time, no response has been received. Additionally, the City of Needles has submitted AB 52 Notification letters of the proposed project to the Fort Mojave Indian Tribe, Morongo Band of Mission Indians, Twenty-Nine Palms Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, and the Colorado River Indian Tribes on 10/7/22 and is awaiting a response. If the tribe requests consultation, the City of Needles will begin consultation within 30 days prior to the release of this document as required by Pub. Res. Code § 21080.3.1.

Analysis:

- a) Finding: The project is unlikely to cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code §5020.1(k). No Impact is anticipated to tribal cultural resources.

Discussion: The proposed project does not contain known Native American resources unless the City of Needles consultation with the appropriate Tribes indicates otherwise.

- b) Finding: The project is unlikely to cause a substantial adverse change in the significance of a tribal cultural resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. Impacts will be considered less than significant with incorporation of Mitigation Measure 5.2.

Discussion: The City of Needles shall require a tribal monitor at the project site during the construction phase. This has been added as Mitigation Measure 5.2.

Applicant Proposed Operation Restrictions: None.

Mitigation: Same as proposed Mitigation Measure 5.2

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Setting:

The proposed development will be served by water supplied by the City of Needles and will require an extension of an existing water line. The City of Needles has provided a “will serve” letter to project ownership for the amount of water requested by the development and can be viewed in Appendix K: City of Needles – Will Serve Letters. The operational water needs are 0.32 gallons per minute (gpm) per household, and with 58 homes this equates to 18.56 gpm for the entire development after full build-out. Detailed calculations for water usage can be viewed in Appendix L: Utility Memos. The groundwater well the City uses for the water source has sufficient capacity to meet the needs of the proposed project.

The proposed development will connect with the City of Needles sewer line for wastewater needs. The proposed project will use electrical power supplied by the City of Needles Public Utility Authority. The estimated power draw for the development is estimated at 0.003653 megawatts (MW) and the calculations can be viewed in Appendix L: Utility Memos.

Analysis:

- a) Finding: The proposed project will not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects. Impacts will be considered less than significant.

Discussion: The City of Needles has provided a “will serve” letter (Appendix K) regarding water and sewer systems and has confirmed that the facilities providing both services will not require any expansion in order to meet the needs of this project. Additionally, the proposed project would not result in the construction of any additional electric power, natural gas or telecommunications facilities.

- b) Finding: The proposed project will have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. The proposed project will have a Less Than Significant Impact to water supplies available to serve the project.

Discussion: The City of Needles has provided a “will serve” letter (Appendix K) for the amount of water requested for the project. The groundwater well that the City utilizes as their municipal water source has sufficient capacity to meet the project's needs as confirmed via email correspondence with a City representative.

- c) Finding: The proposed project will not result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to

the provider's existing commitments. Impacts will be considered less than significant.

Discussion: Communications with City representatives have determined the proposed project is not anticipated to contribute toward any significant increase in capacity needs of stormwater drainage facilities.

- d) Finding: The proposed project will not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The proposed project will have a Less Than Significant Impact regarding generation of solid waste in excess of state or local standards.

Discussion: The proposed project is not anticipated to generate significant non-compostable or non-recyclable solid waste. Assuming regional growth in waste generation of 3 percent per year, the nearest landfill identified as a disposal area for solid waste for the project has adequate capacity until 2051. The Needles Solid Waste Disposal Site services the City of Needles for solid waste needs.

- e) Finding: The proposed project will not violate any federal, state, and local statutes and regulations related to solid waste. Impacts would be considered less than significant.

Discussion: The project is not anticipated to generate any hazardous waste or a significant amount of compostable or non-compostable waste. All wastes generated will be disposed of at appropriate facilities with adequate capacity to handle the waste.

Applicant Proposed Operation Restrictions: None.

Mitigation: None required.

20. WILDFIRE

Would the project: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Setting:

The surrounding plant communities both onsite and adjacent to the proposed project site have minimal fuel load potential for wildfires. Although wildfires occur occasionally in desert habitats, the desert scrub plant community located within the proposed project site is relatively low in density in comparison to other denser plant communities prone to wildfire (i.e. Chaparral, Oak woodlands). The proposed project is not located within a state responsibility area or land classified as very high fire hazard severity zone.

Analysis:

- a) Finding: The proposed project will have no impact to an adopted emergency response plan or emergency evacuation plan.

Discussion: The proposed project is not located near state responsibility areas or lands classified as very high fire hazard severity zones.

- b) Finding: The project will have no impact on exacerbating wildfire risks, and thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Discussion: The proposed project is not located near state responsibility areas or lands classified as very high fire hazard severity zones.

- c) Finding: The project will have no impact on exacerbating fire risk by the installation or maintenance of associated infrastructure.

Discussion: The proposed project is not located near state responsibility areas or lands classified as very high fire hazard severity zones.

- d) Finding: The project will have no impact on people or structures as a result of runoff from post-fire slope instability or drainage changes.

Discussion: The proposed project is not located near state responsibility areas or lands classified as very high fire hazard severity zones.

MANDATORY FINDINGS OF SIGNIFICANCE

Would:	Potentially Significant	Potentially Significant Unless Mitigation Incorp.	Less Than Significant Impact	No Impact
The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.	☐	☒	☐	☐
The project will not have impacts that are individually limited, but cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects?	☐	☒	☐	☐
The project is not of a type or located in an area that will cause substantial adverse effects on human beings?	☐	☒	☐	☐

Setting:

The proposed project is located in an urban setting in the City of Needles and consists of the construction of a residential development.

After performing record searches from CNDDB/USFWS/LCR MSHCP, it was determined that 1 plant species and 37 animal species have the potential for occurrence within a 5-mile radius of the propose project site. After further research and focused surveys, no special status plants or animals are expected to be impacted by the implementation of the proposed project.

As previously described, a records search and a field survey were conducted to analyze cultural resources within the vicinity of the proposed project. No cultural resources were identified on the parcel, but the research still recommended measures as appropriate precautions against adversely impacting tribal or historic resources.

Analysis:

- a) Finding: The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Discussion: As previously described in the Biological Resources section of this document, the project is highly unlikely to impact a plant or wildlife population and will not have an adverse effect on habitat for fish or wildlife. However, mitigation measures have been added to ensure impacts to wildlife remain less than significant.

The records search did not reveal any existing recorded sites within the project site, nor did the field survey discover any cultural resources. Research indicated appropriate mitigation measures in case human remains are unearthed during construction activities. With these mitigation measures in place, the project will have a Less than Significant Impact in regard to its potential to degrade biological or cultural resources.

- b) Finding: The project will not have impacts that are individually limited, but cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.

Discussion: Previous sections describe project impacts to Biological Resources, Cultural Resources, Noise, and Tribal Resources and provide mitigation measures that reduce these impacts to Less than Significant levels. However, the proposed project must be considered along with other past projects and reasonably foreseeable future projects that may cumulatively result in a significant impact to the environment.

The effects of this project in relation to other development projects within the City of Needles includes an increased

demand on the local electrical transmission infrastructure. Few development projects have been permitted or proposed within the City of Needles. As of early 2018, the City increased their electrical allocation from 35 megawatts (MW) to 60 MW to provide over 40 MW of additional power for new development. The City electrical utility obtains their electricity from the Western Area Power Administration (WAPA). WAPA has indicated that they would be able to supply upwards of 100 MW to the City of Needles if a formerly used Nevada Power line is rehabilitated (Needles Desert Star 2017), which points to transmission as the major limiting factor and not generation of electricity. It is assumed that no additional generation will need to be installed to meet the demands of this project or other past and reasonably foreseeable projects that can be cumulatively analyzed. Therefore, the cumulative impact on electrical utilities is considered Less than Significant.

Likewise, a cumulative effect of the project along with other developments within the City of Needles is an increased water demand on the municipal supply. The City has indicated via email correspondence that they are able to meet the demand of this project and other projects without taxing the current water system. The cumulative impact to Hydrology and Water Quality and Utilities and Service Systems are considered Less than Significant.

The project along with other developments in the City of Needles all have the potential to impact air quality in the area. The construction impacts from the proposed project are temporary, and with the proposed operating restrictions, the impacts are considered less than significant. These impacts are no different than any other light commercial construction.

The project does not present a significant risk to cultural resources, and it is unnecessary to consider the project along with other projects in the area, as any effects of this project will be isolated to the limited ground disturbance at the urban project site.

The noise impacts of the proposed project will be mitigated to a level of less than 65 dBA at the property line, which is consistent with residential standards. There are no other projects proposed in the immediate project vicinity. Cumulative noise impacts are considered Less than Significant with incorporation of the mitigation measures listed in the Noise section above.

There will be No Impact to Agricultural and Forestry, Geology and Soils, Greenhouse Gases, Land Use, Mineral Resources, Recreation, Population and Housing, and Transportation and Traffic. Therefore, it will not add to any impacts that may be cumulatively considerable.

Therefore, based on this analysis, the project will not result in any impacts that are individually limited but cumulatively considerable.

- c) **Finding:** The proposed project is not of a type or located in an area that will cause substantial adverse effects on human beings.

Discussion: Based on all of the previous analysis and findings, it can be found that the proposed project is not located in an area and will not cause a substantial adverse effect on human beings with mitigation incorporated. The impact will be Less than Significant.

Mitigation:

All of the following mitigation measures shall apply.

Mitigation Measure 4.1: A focused plant survey will be conducted prior to construction during the appropriate growing season to identify any special-status desert dwelling plants that have the potential for occurring on the proposed project site.

Mitigation Measure 4.2: If work must be completed during the nesting bird season (February 15–August 31), then a pre-construction survey must be completed by a qualified biologist to survey for active bird nests on the project site within the project footprint and in a 300-foot buffer (500-foot buffer for raptor species) surrounding the project. This survey must occur no more than three days prior to when construction begins. If nests are discovered, a qualified biologist shall establish a species appropriate buffer around the nest that shall remain in place until the nest is determined by a qualified biologist to be

Pacific BioScience, Inc.

Riverlux Resort Initial Study and Mitigated Negative Declaration

inactive.

Mitigation Measure 4.3: A qualified biologist shall survey for desert tortoise prior to construction. In the event an individual is found, consultation with CDFW and USFWS will occur immediately.

Mitigation Measure 4.4: A qualified biologist shall survey for burrowing owl prior to construction. In the event burrowing owl or their sign is observed during pre-construction surveys, the applicant will consult with CDFW prior to clearing and grubbing activities.

Mitigation Measure 5.1: During the initial construction phase involving grading and earthwork activities, a qualified archaeological and paleontological monitor shall be present on-site. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological significance, the qualified monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, faunal bones, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

Mitigation Measure 5.2: To minimize the potential for any adverse impacts to tribal cultural resources, the City of Needles requires a tribal cultural monitor to be on site during the ground-disturbance phases of the project. The applicant will coordinate the services of a tribal monitor with the Twenty-Nine Palms Band of Mission Indians, Morongo Band of Mission Indians, Fort Mojave Indian Tribe, Colorado River Indian Tribes, and Torres Martinez Desert Cahuilla Indians.

Mitigation Measure 13.1: The applicant shall acknowledge that the noise generated by operation of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA Ldn. To ensure compliance, noise measurements will be taken post construction during residential use and will be submitted to the City of Needles. In the event that noise levels are exceeded, construction of sound walls to abate noise from residences or speed bumps to reduce vehicular traffic noise shall be proposed.

Mitigation Measure 13.2: The following shall apply to construction noise from tools and equipment:

- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. The applicant is requesting work to be allowed between 8:00 a.m. and 6:00 p.m. on Saturdays.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory-approved muffler systems.

21. DISCUSSION OF MITIGATION MEASURES AND APPLICANT PROPOSED RESTRICTIONS

The City of Needles found that the project could result in potentially significant adverse impacts unless mitigation measures are required. A list of Mitigation that addresses and mitigates potentially significant adverse impacts to a level of non-significance follows.

Mitigation:

Mitigation Measure 4.1 (Biological Resources): A focused plant survey will be conducted prior to construction during the appropriate growing season to identify any special-status desert dwelling plants that have the potential for occurring on the proposed project site.

Mitigation Measure 4.2: If work must be completed during the nesting bird season (February 15–August 31), then a pre-construction survey must be completed by a qualified biologist to survey for active bird nests on the project site within the project footprint and in a 300-foot buffer (500-foot buffer for raptor species) surrounding the project. This survey must occur no more than three days prior to when construction begins. If nests are discovered, a qualified biologist shall establish a species appropriate buffer around the nest that shall remain in place until the nest is determined by a qualified biologist to be inactive.

Mitigation Measure 4.3: A qualified biologist shall survey for desert tortoise prior to construction. In the event an individual is found, consultation with CDFW and USFWS will occur immediately.

Mitigation Measure 4.4: A qualified biologist shall survey for burrowing owl prior to construction. In the event burrowing owl or their sign is observed during pre-construction surveys, the applicant will consult with CDFW prior to clearing and grubbing activities.

Mitigation Measure 5.1 (Cultural Resources): During the initial construction phase involving grading and earthwork activities, a qualified archaeological and paleontological monitor shall be present on-site. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological significance, the qualified monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, faunal bones, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

Mitigation Measure 5.2: To minimize the potential for any adverse impacts to tribal cultural resources, the City of Needles requires a tribal cultural monitor to be on site during the ground-disturbance phases of the project. The applicant will coordinate the services of a tribal monitor with the Twenty-Nine Palms Band of Mission Indians, Morongo Band of Mission Indians, Fort Mojave Indian Tribe, Colorado River Indian Tribes, and Torres Martinez Desert Cahuilla Indians.

Mitigation Measure 13.1 (Noise): The applicant shall acknowledge that the noise generated by operation of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA Ldn. To ensure compliance, noise measurements will be taken post construction during residential use and will be submitted to the City of Needles. In the event that noise levels are exceeded, construction of sound walls to abate noise from residences or speed bumps to reduce vehicular traffic noise shall be proposed.

Mitigation Measure 13.2: The following shall apply to construction noise from tools and equipment:

- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to

- between the hours of 8: 00 a.m. and 6:00 p.m. Monday through Friday.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory- approved muffler systems.

Applicant proposed operating restrictions:

AES-1: The project will manage its lighting as prescribed in City of Needles Ordinance 594-AC and amended Chapter 12A of the Needles Municipal Code, in compliance with the City’s lighting standards regarding fixture type, wattage, illumination levels, and shielding. The indoor grow lighting system will also be shielded to confine light and glare to the interior of the proposed structure. The landscaping and planting plan will include the planting of desert-appropriate and native vegetation such as palm trees and native desert cacti, consistent with the visual context of the area. The planting palette will prohibit the inclusion of invasive species that are listed on CalIPC and the CDFA California Noxious Weeds list.

AES-2: The proposed buildings will not exceed 35 feet in height.

AQ-1: During short-term construction activities, the following dust control measures will be implemented to reduce nuisance dust generation:

- All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered twice daily for dust suppression when construction activities are occurring on-site.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All standing soil, sand, or other loose material left on-site shall be covered and secured.
- Adjacent public roads shall be kept clean of loose dirt tracked onto the roadways from the construction-site.
- All vehicle speeds shall be limited to 5 miles per hour.

GS-1: During short-term construction activities, all exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered twice daily for soil retention and dust suppression when construction activities are occurring on-site.

GGE-1: Equipment used during construction will be compliant with Tier 4 Emission Standards under Environmental Protection Agency (EPA) rule.

HHM-1: MSDS shall be provided to the City of Needles for all potentially hazardous materials used in the operation in the event that emergency responders may require them.

22. EARLIER ANALYSES.

Earlier analysis may be used where, pursuant to the tiering, program Environmental Impact Report (EIR), or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

No earlier analyses were used.

SOURCE/REFERENCE LIST

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MITIGATION MONITORING AND REPORTING PLAN:

Mitigation Measure 4.1 (Biological Resources): A focused plant survey will be conducted prior to construction during the appropriate growing season to identify any special-status desert dwelling plants that have the potential for occurring on the proposed project site.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
Prior to construction activities	Each time prior to construction activities for each phase during appropriate growing season		City of Needles		

Mitigation Measure 4.2 If work must be completed during the nesting bird season (February 15– August 31), then a pre-construction survey should be completed by a qualified biologist to survey for active bird nests on the project site within the project footprint and in a 300-foot buffer (500-foot buffer for raptor species) surrounding the project. This survey must occur no more than three days prior to when construction begins. If nests are discovered, a qualified biologist shall establish a species appropriate buffer around the nest that shall remain in place until the nest is determined by a qualified biologist to be inactive.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
Prior to construction activities	Each time prior to construction activities for each phase, if construction starts during nesting bird season		City of Needles		

Mitigation Measure 4.3: A qualified biologist shall survey for desert tortoise prior to construction. In the event an individual is found, consultation with CDFW and USFWS will occur immediately.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
Prior to construction activities	Each time prior to construction activities for each phase, if construction starts during nesting bird season		City of Needles		

Mitigation Measure 4.4: A qualified biologist shall survey for burrowing owl prior to construction. In the event burrowing owl or their sign is observed during pre-construction surveys, the applicant will consult with CDFW prior to clearing and grubbing activities.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
Prior to construction activities	Each time prior to construction activities for each phase, if		City of Needles		

	construction starts during nesting bird season			
--	--	--	--	--

Mitigation Measure 5.1 (Cultural Resources): During the initial construction phase involving grading and earthwork activities, a qualified archaeological and paleontological monitor shall be present on-site. In the event of a discovery of an archaeological or paleontological resource, the monitor shall have the discretion to halt all ground disturbing activities within 50 feet of the find until it has been evaluated for significance. If the find is determined to have archaeological or paleontological significance, the qualified monitor shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, faunal bones, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
During construction activity.	Continuous during construction		City of Needles		

Mitigation Measure 5.2: To minimize the potential for any adverse impacts to tribal cultural resources, the City of Needles requires a tribal cultural monitor to be on site during the ground-disturbance phases of the project. The applicant will coordinate the services of a tribal monitor with the Twenty-Nine Palms Band of Mission Indians, Morongo Band of Mission Indians, Fort Mojave Indian Tribe, Colorado River Indian Tribes, and Torres Martinez Desert Cahuilla Indians.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
During construction activity.	Continuously during construction		City of Needles		

Mitigation Measure 13.1: The applicant shall acknowledge that the noise generated by operation of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA Ldn. To ensure compliance, noise measurements will be taken post construction during residential use and will be submitted to the City of Needles. In the event that noise levels are exceeded, construction of sound walls to abate noise from residences or speed bumps to reduce vehicular traffic noise shall be proposed.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
Post construction.	Continuous post construction		City of Needles		

Mitigation Measure 13.2: The following shall apply to construction noise from tools and equipment:

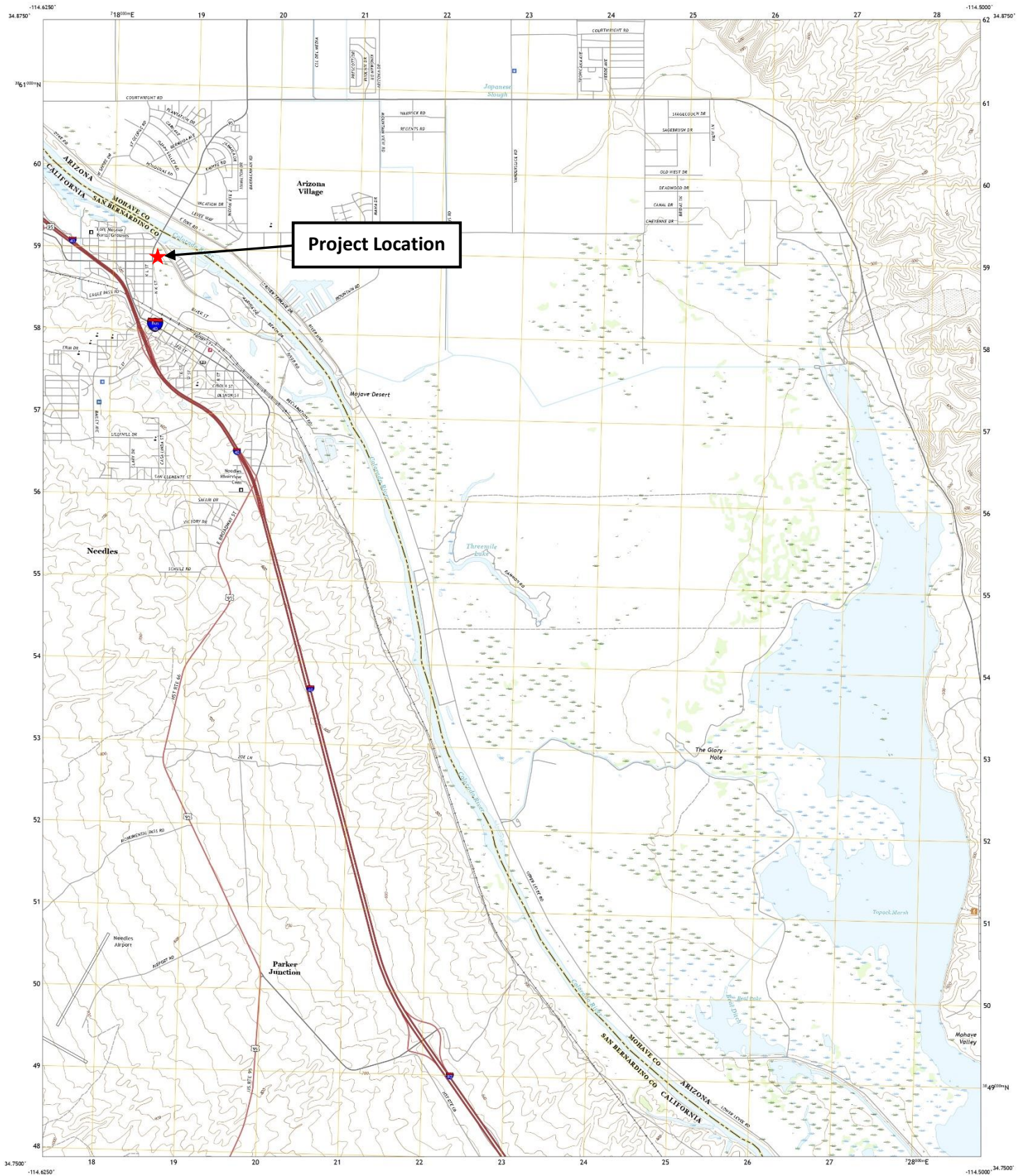
- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to between the hours of 8: 00 a.m. and 6:00 p.m. Monday through Friday.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.

- All stationary and construction equipment shall be maintained in good working order and fitted with factory- approved muffler systems.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes No	Comments / Action Taken
During construction activity.	Continuous during construction		City of Needles		

APPENDIX A

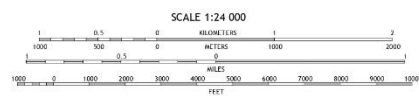
Project Area Maps



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1:600 meter grid/contour interval. Transverse Mercator, Zone 15S
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery: NAD83, June 2015, October 2016
Roads: U.S. Census Bureau, 2016, 2018
Names: National Hydrography Dataset, 2014 - 2016
Cartography: National Geographic, 2012 - 2016
Boundaries: Multiple sources; see metadata file 2016 - 2017
Public Land Survey System: BLM, 2011 - 2018
Wetlands: FWS National Wetlands Inventory 1972 - 2014

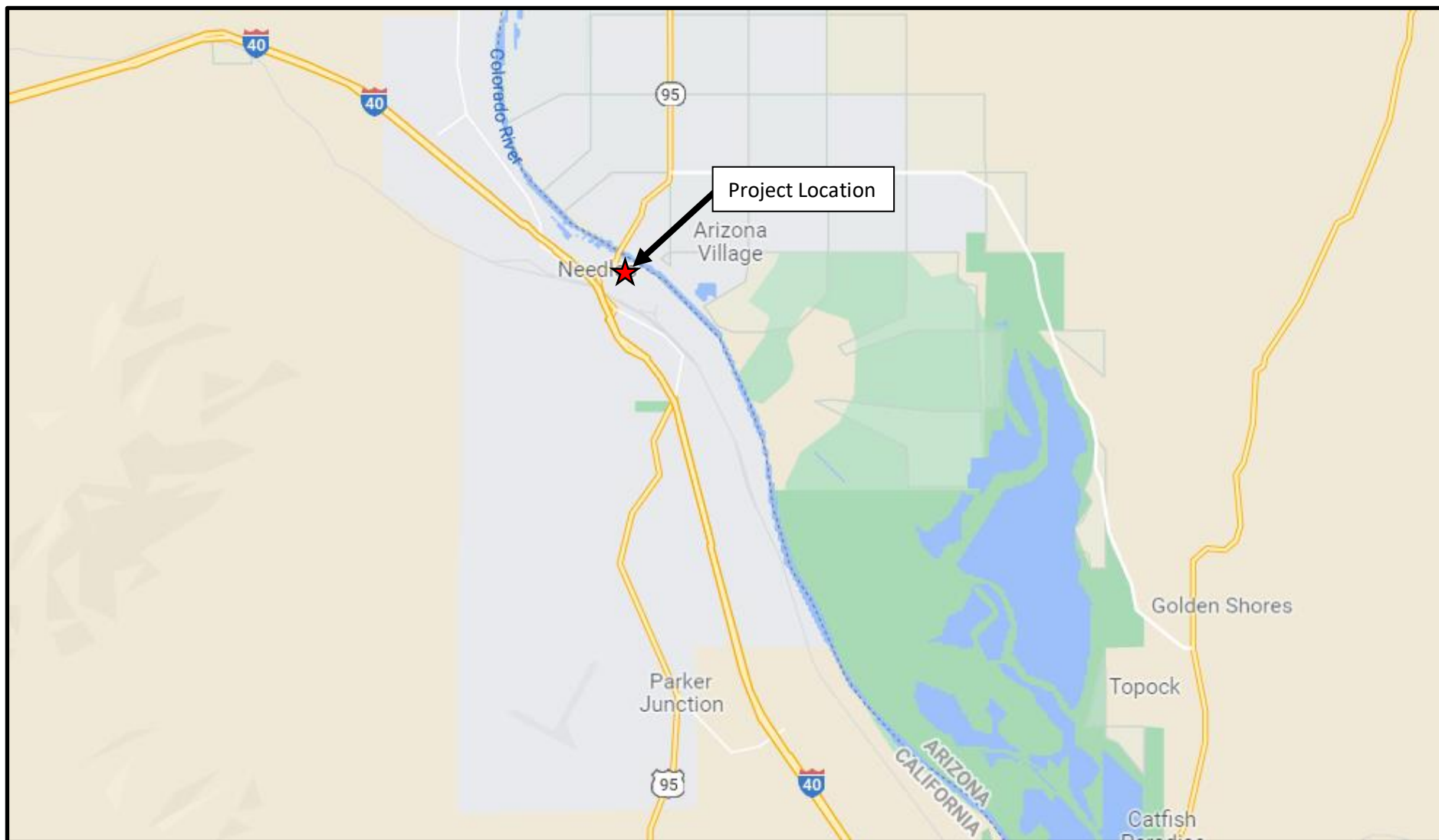


1	2	3
4	5	6
7	8	9

NEEDLES 7.5-MINUTE QUADRANGLE

ROAD CLASSIFICATION	
Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
	State Route



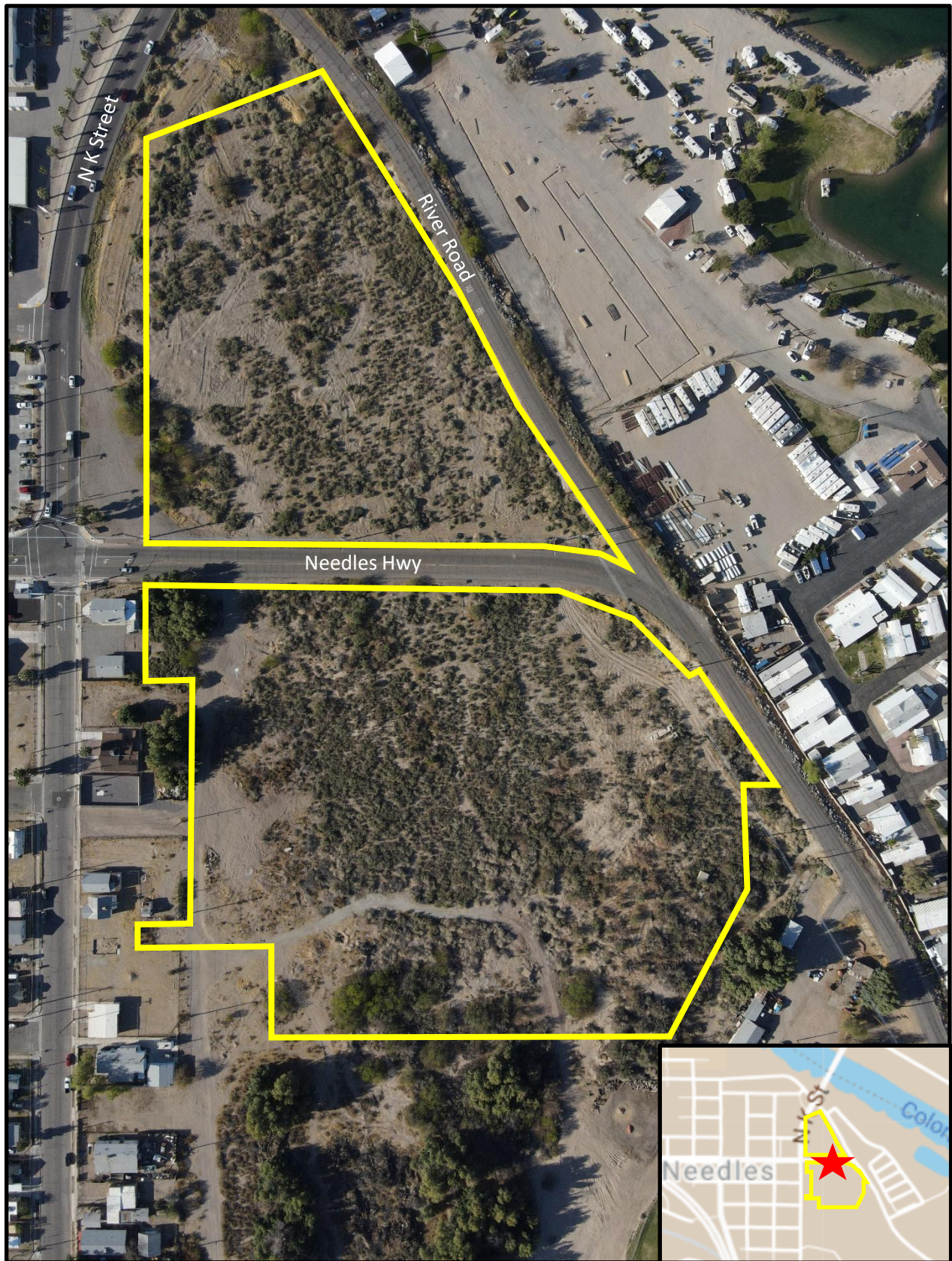


LEGEND

★ Project Site

FIGURE 1
Project Location





0 50 150 300 600 FEET



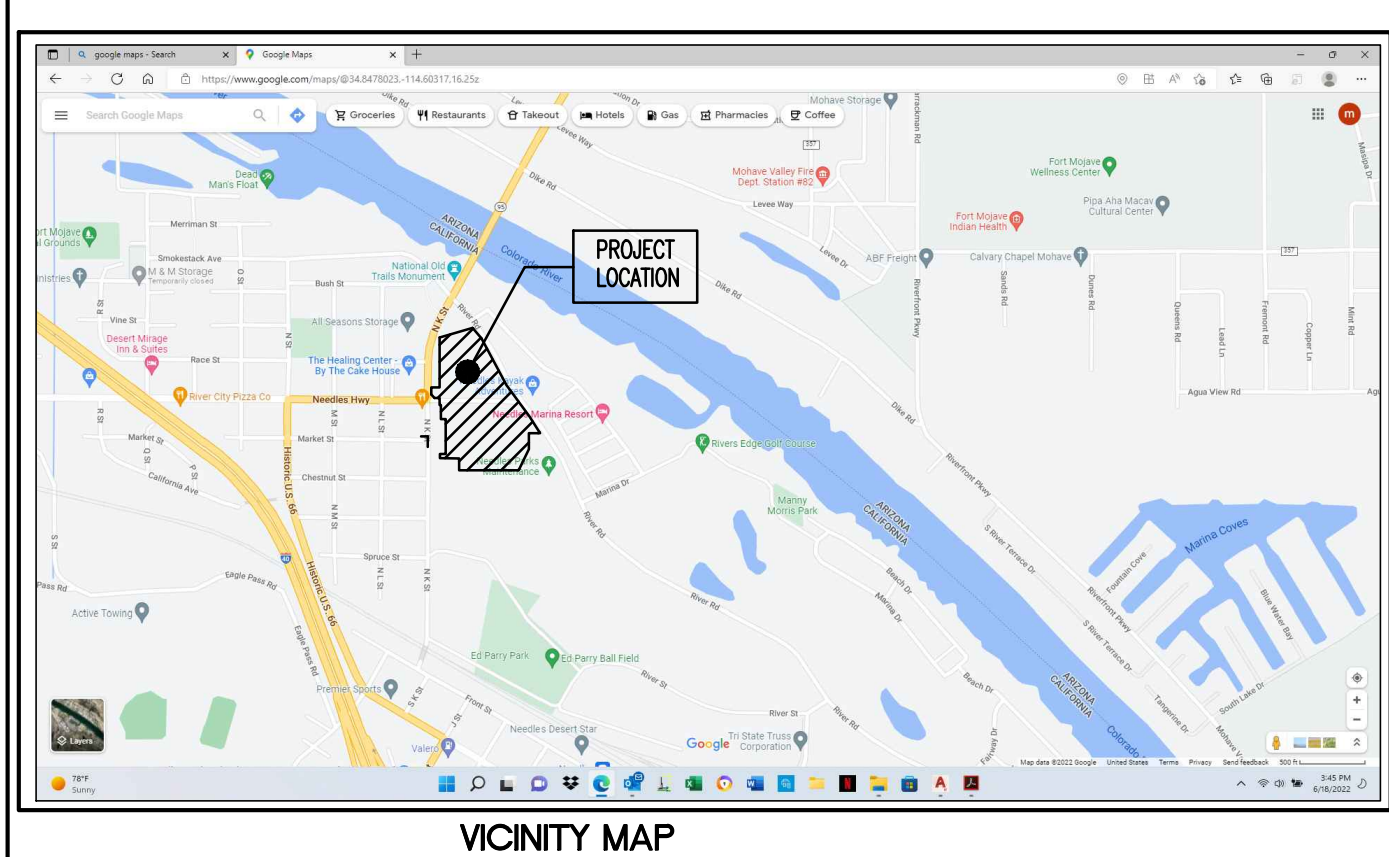
LEGEND

-  Project Limits
-  Project Site

FIGURE 2
Project Limits

APPENDIX B

Project Site Plans

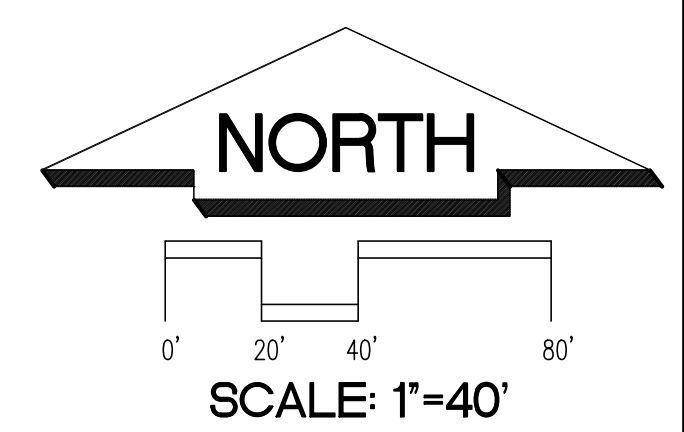


TENTATIVE TRACT NO. 20478

IN THE CITY OF NEEDLES, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

BEING A PORTION OF GOVERNMENT LOT 4 OF THE NORTHWEST 1/4 OF SECTION 29, TOWNSHIP 9 NORTH, RANGE 23 EAST, S.B.M., TOGETHER WITH LOTS 32, 33 AND 34, BLOCK 48, DENNIS SUBDIVISION NO. 2, INCLUDING A PORTION OF THE EAST 165 FEET OF THE NORTHEAST 1/4 OF SECTION 30, TOWNSHIP 9 NORTH, RANGE 23 EAST, S.B.M., AND PORTIONS OF SECTION 29, TOWNSHIP 9 NORTH, RANGE 23 EAST, S.B.M., IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

SHEET 1 OF 1 SHEETS



GENERAL NOTES

1. ALL STREETS TO BE PRIVATELY OWNED AND MAINTAINED BY HOA.
2. DRAINAGE CONCEPT AS SHOWN AND AS STIPULATED IN HYDROLOGY REPORT. SEPARATE GRADING PLAN TO BE PROVIDED UPON ENTITLEMENT.
3. NO EXISTING STREET IMPROVEMENTS ARE PROPOSED.
4. ZONING AND COVERING PLAN TO REMAIN WITH NO CHANGES.
5. UTILITY SERVICES AS INDICATED HEREIN. ALL DRAINAGE, SEWER AND WATER IMPROVEMENTS CONSTRUCTED WITH THIS DEVELOPMENT TO BE PRIVATELY OWNED AND MAINTAINED BY HOA. SEPARATE PLANS TO BE PROVIDED UPON ENTITLEMENT.
6. EXISTING USE: VACANT.
7. PROPOSED USE: SINGLE FAMILY RESIDENTIAL HOMES.
8. THERE ARE NO EXISTING FLOOD PLANS WITHIN THE PROPERTY BOUNDARY LIMITS.
9. ALL ACCESS ROADS SHALL ADHERE TO THE RECORDS OF FIRE DEPARTMENT STD. A1 AND A2.
10. ALL SEWER LIFT STATIONS TO BE PRIVATELY MAINTAINED BY HOA.
11. THE CITY OF NEEDLES WILL BE GRANTED AN EASEMENT FOR ELECTRICAL CONDUITS AND POWER LINES NEAR, SUCH AS TRANSFORMERS, UTILITY BOXES, ETC. TO THE SATISFACTION OF THE CITY UTILITY COMPANY.

UTILITY SERVICES

1. SEWER SERVICE BY THE CITY OF NEEDLES.
817 THIRD STREET
NEEDLES, CA 92363
(760) 326-5700
2. WATER SERVICE BY THE CITY OF NEEDLES.
817 THIRD STREET
NEEDLES, CA 92363
(760) 326-5700
3. ELECTRIC SERVICE BY THE CITY OF NEEDLES.
817 THIRD STREET
NEEDLES, CA 92363
(760) 326-5700
4. GAS SERVICE BY:
SOUTHWEST GAS CORP.
1705 LANFORD DRIVE
BULLHEAD CITY, AZ 86442
(800) 446-4642; (928) 763-7766
5. TELEVISION SERVICE BY:
GOLDEN VALLEY CABLE AND COMM.
1058 E. BROADWAY AVE.
NEEDLES, CA 92363
(760) 326-4190
6. TELEPHONE SERVICE BY:
FRONTIER COMMUNICATIONS
911 W. BROADWAY
NEEDLES, CA 92363
(760) 326-4200

PREPARED FOR:

RIVERLUX RESORT
2901 DAWSON HILLS ROAD
SUITE 1709 PMB-300
LAKE ELSDORE, CA 92532
(951) 555-0599

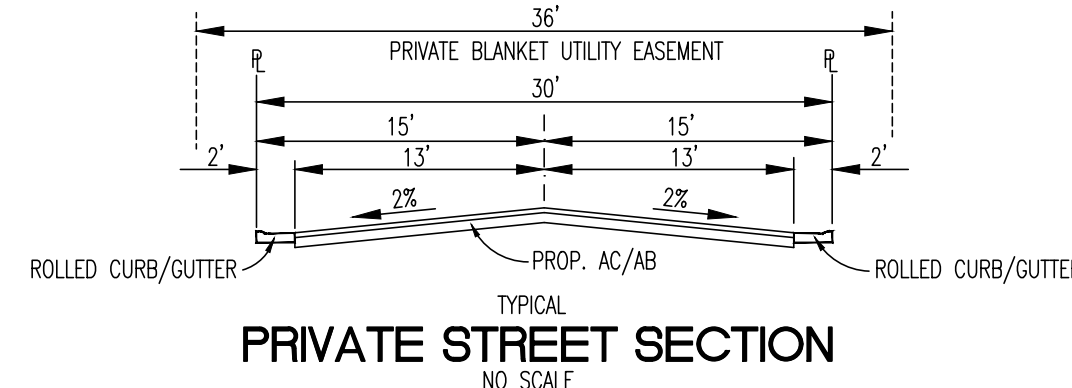
PREPARED BY:

raab engineering
21851 NEWLAND STREET SPACE 30
HUNTINGTON BEACH, CA 92646
(951) 255-4044 ext

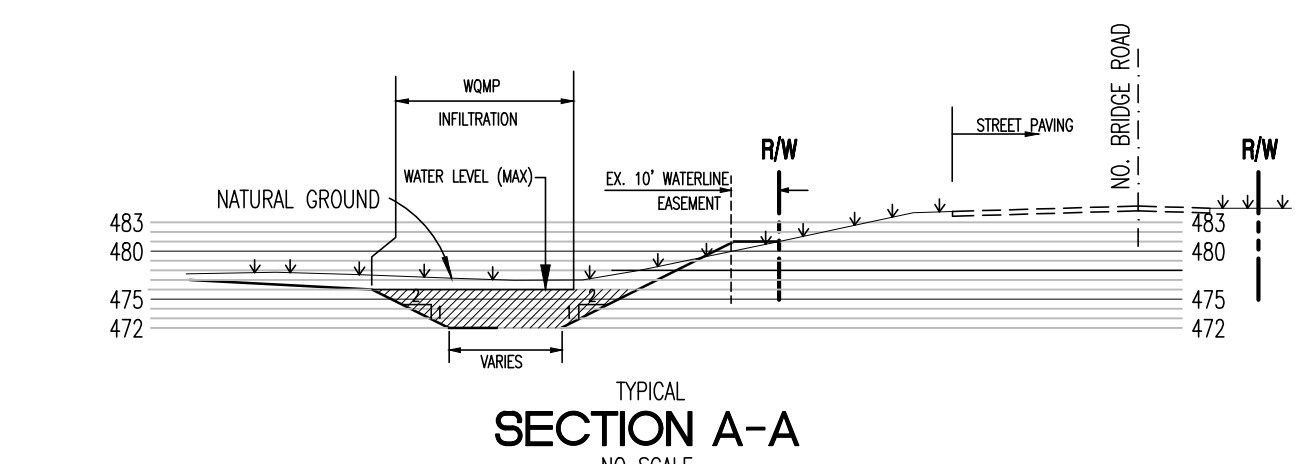
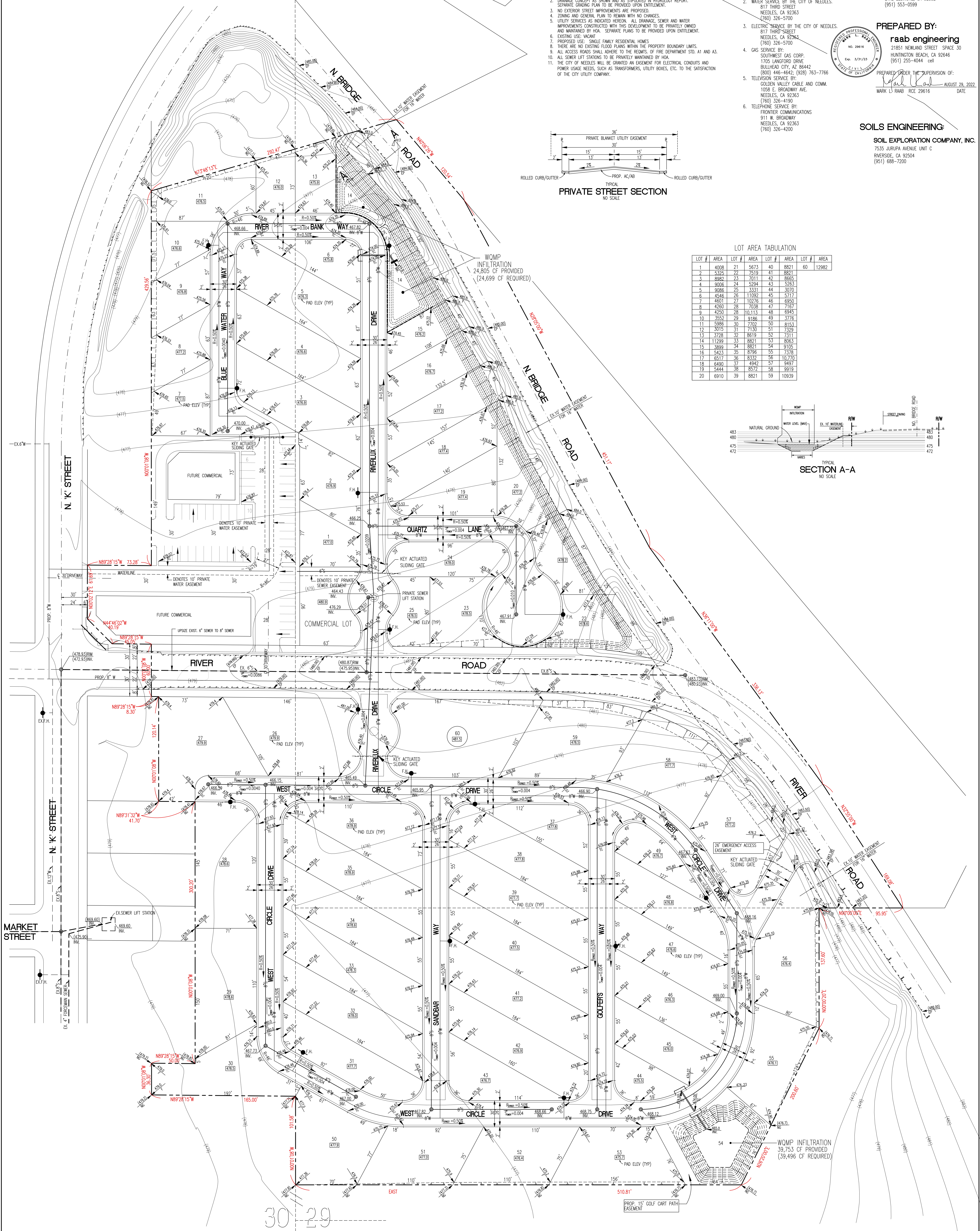
PREPARED UNDER THE SUPERVISION OF:
MARK L. RAAB, P.E. RCE 29616 DATE: AUGUST 29, 2022

SOILS ENGINEERING:

SOIL EXPLORATION COMPANY, INC.
7535 JURUPA AVENUE UNIT C
RIVERSIDE, CA 92504
(951) 688-7200



LOT AREA TABULATION									
LOT #	AREA	LOT #	AREA	LOT #	AREA	LOT #	AREA	LOT #	AREA
1	4008	21	5673	40	8821	60	12982		
2	3325	22	7819	41	8821				
3	8882	23	7011	42	8865				
4	9006	24	5294	43	5263				
5	9086	25	3331	44	3070				
6	4546	26	11092	45	5717				
7	4001	27	10076	46	6860				
8	4260	28	7038	47	7167				
9	4250	29	10113	48	6965				
10	3552	30	9186	49	3776				
11	5886	31	7700	50	8153				
12	3015	32	7130	51	2329				
13	3728	33	8619	52	2311				
14	11709	34	6881	53	8821				
15	6892	35	8795	54	9105				
16	5413	36	8337	55	7378				
17	6517	37	8337	56	10770				
18	6490	38	4942	57	9457				
19	3444	39	8572	58	9319				
20	6910	40	8821	59	10639				



RIVERLUX RESORT



RIVERLUX RESORT | NEEDLES, CA

MIKE WEST
30950 LONG POINT DRIVE
CANYON LAKE, CA 92587
P: (951) 316-2920



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RIVERLUX RESORT | NEEDLES, CA
GOLF COURSE EASEMENT

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CANYON LAKE, CA 92587
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GOLF COURSE EASEMENT

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CANYON LAKE, CA 92587
P: (951) 316-2920



RIVERLUX RESORT | NEEDLES, CA
RV GARAGE SUNDECK

MIKE WEST
30950 LONG POINT DRIVE
CANYON LAKE, CA 92587
P: (951) 316-2920



RIVERLUX RESORT | NEEDLES, CA

RV GARAGE SUNDECK

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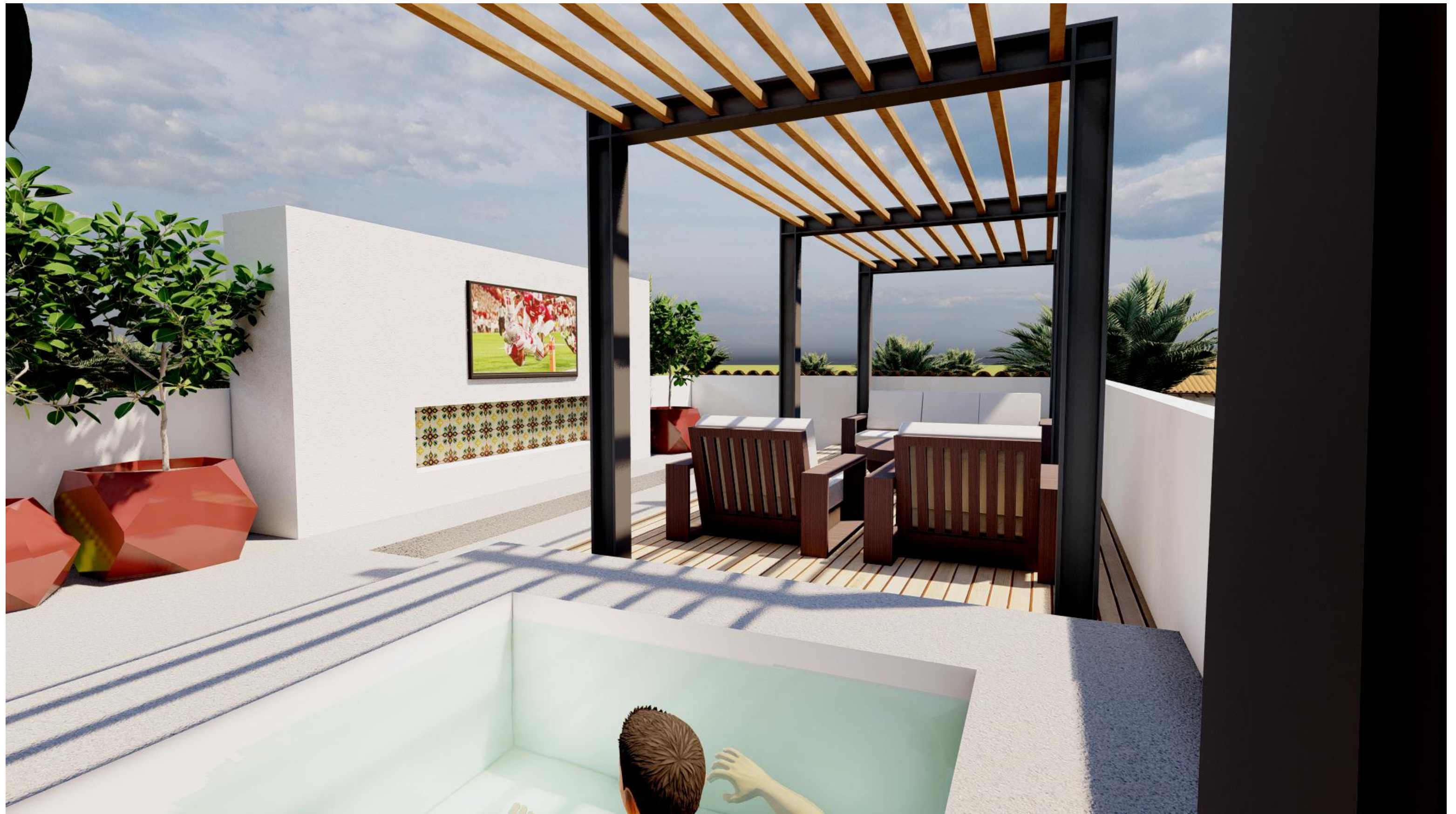
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RIVERLUX RESORT | NEEDLES, CA
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APPENDIX C

CalEEMod Analysis

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Riverlux Resort
Mojave Desert AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	128.00	Dwelling Unit	14.00	230,400.00	366

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	30
Climate Zone	10			Operational Year	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed development occurs on 14 acres of undeveloped land.

Land Use Change -

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	41.56	14.00

2.0 Emissions Summary

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1455	1.4149	1.2005	2.3700e-003	0.2523	0.0655	0.3178	0.1096	0.0608	0.1704	0.0000	208.1457	208.1457	0.0557	1.2800e-003	209.9189
2023	0.2222	1.9244	2.2760	4.2200e-003	0.0587	0.0909	0.1495	0.0159	0.0854	0.1013	0.0000	369.3557	369.3557	0.0735	5.6000e-003	372.8609
2024	3.6114	0.0601	0.0950	1.5000e-004	1.3300e-003	2.9600e-003	4.2900e-003	3.5000e-004	2.7700e-003	3.1200e-003	0.0000	13.5766	13.5766	3.4100e-003	3.0000e-005	13.6705
Maximum	3.6114	1.9244	2.2760	4.2200e-003	0.2523	0.0909	0.3178	0.1096	0.0854	0.1704	0.0000	369.3557	369.3557	0.0735	5.6000e-003	372.8609

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1455	1.4149	1.2005	2.3700e-003	0.2523	0.0655	0.3178	0.1096	0.0608	0.1704	0.0000	208.1454	208.1454	0.0557	1.2800e-003	209.9187
2023	0.2222	1.9244	2.2760	4.2200e-003	0.0587	0.0909	0.1495	0.0159	0.0854	0.1013	0.0000	369.3554	369.3554	0.0735	5.6000e-003	372.8606
2024	3.6114	0.0601	0.0950	1.5000e-004	1.3300e-003	2.9600e-003	4.2900e-003	3.5000e-004	2.7700e-003	3.1200e-003	0.0000	13.5765	13.5765	3.4100e-003	3.0000e-005	13.6704
Maximum	3.6114	1.9244	2.2760	4.2200e-003	0.2523	0.0909	0.3178	0.1096	0.0854	0.1704	0.0000	369.3554	369.3554	0.0735	5.6000e-003	372.8606

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2022	10-31-2022	1.1499	1.1499
2	11-1-2022	1-31-2023	0.5822	0.5822
3	2-1-2023	4-30-2023	0.5316	0.5316
4	5-1-2023	7-31-2023	0.5492	0.5492
5	8-1-2023	10-31-2023	0.5493	0.5493
6	11-1-2023	1-31-2024	2.8343	2.8343
7	2-1-2024	4-30-2024	1.1631	1.1631
		Highest	2.8343	2.8343

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.3203	0.1678	10.8641	0.0180		1.3953	1.3953		1.3953	1.3953	132.2186	57.0030	189.2216	0.1235	0.0104	195.4085
Energy	0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	374.0155	374.0155	0.0190	5.3900e-003	376.0964
Mobile	0.6110	0.9702	5.8663	0.0123	1.2794	0.0109	1.2904	0.3415	0.0103	0.3518	0.0000	1,154.9521	1,154.9521	0.0669	0.0618	1,175.0525
Waste						0.0000	0.0000		0.0000	0.0000	30.4608	0.0000	30.4608	1.8002	0.0000	75.4654
Water						0.0000	0.0000		0.0000	0.0000	2.6458	29.6174	32.2632	0.2743	6.7200e-003	41.1219
Total	9.9509	1.3048	16.8013	0.0314	1.2794	1.4197	2.6992	0.3415	1.4191	1.7606	165.3252	1,615.5880	1,780.9132	2.2838	0.0844	1,863.1446

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

[illegible]

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**2.3 Vegetation****Vegetation**

	CO2e
Category	MT
Vegetation Land Change	0.0000
Total	0.0000

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2022	8/26/2022	5	20	
2	Site Preparation	Site Preparation	8/27/2022	9/9/2022	5	10	
3	Grading	Grading	9/10/2022	10/21/2022	5	30	
4	Building Construction	Building Construction	10/22/2022	12/15/2023	5	300	
5	Paving	Paving	12/16/2023	1/12/2024	5	20	
6	Architectural Coating	Architectural Coating	1/13/2024	2/9/2024	5	20	

Acres of Grading (Site Preparation Phase): 15**Acres of Grading (Grading Phase): 90****Acres of Paving: 0****Residential Indoor: 466,560; Residential Outdoor: 155,520; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	9	46.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.9700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9679	0.9679	3.0000e-005	3.0000e-005	0.9779
Total	5.0000e-004	3.6000e-004	3.9700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9679	0.9679	3.0000e-005	3.0000e-005	0.9779

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.9700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9679	0.9679	3.0000e-005	3.0000e-005	0.9779
Total	5.0000e-004	3.6000e-004	3.9700e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9679	0.9679	3.0000e-005	3.0000e-005	0.9779

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0983	8.0600e-003	0.1064	0.0505	7.4200e-003	0.0579	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.2000e-004	2.3800e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5807	0.5807	2.0000e-005	2.0000e-005	0.5867
Total	3.0000e-004	2.2000e-004	2.3800e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5807	0.5807	2.0000e-005	2.0000e-005	0.5867

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	0.0159	0.1654	0.0985	1.9000e-004	0.0983	8.0600e-003	0.1064	0.0505	7.4200e-003	0.0579	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.2000e-004	2.3800e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5807	0.5807	2.0000e-005	2.0000e-005	0.5867
Total	3.0000e-004	2.2000e-004	2.3800e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5807	0.5807	2.0000e-005	2.0000e-005	0.5867

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1381	0.0245	0.1626	0.0548	0.0226	0.0774	0.0000	81.8019	81.8019	0.0265	0.0000	82.4633

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.3000e-004	7.9500e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9358	1.9358	7.0000e-005	6.0000e-005	1.9558
Total	1.0000e-003	7.3000e-004	7.9500e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9358	1.9358	7.0000e-005	6.0000e-005	1.9558

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0544	0.5827	0.4356	9.3000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632
Total	0.0544	0.5827	0.4356	9.3000e-004	0.1381	0.0245	0.1626	0.0548	0.0226	0.0774	0.0000	81.8018	81.8018	0.0265	0.0000	82.4632

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.3000e-004	7.9500e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9358	1.9358	7.0000e-005	6.0000e-005	1.9558
Total	1.0000e-003	7.3000e-004	7.9500e-003	2.0000e-005	2.4200e-003	1.0000e-005	2.4300e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9358	1.9358	7.0000e-005	6.0000e-005	1.9558

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0427	0.3904	0.4091	6.7000e-004		0.0202	0.0202		0.0190	0.0190	0.0000	57.9313	57.9313	0.0139	0.0000	58.2783
Total	0.0427	0.3904	0.4091	6.7000e-004		0.0202	0.0202		0.0190	0.0190	0.0000	57.9313	57.9313	0.0139	0.0000	58.2783

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0151	6.6200e-003	7.0000e-005	2.3400e-003	2.0000e-004	2.5400e-003	6.8000e-004	1.9000e-004	8.7000e-004	0.0000	6.7978	6.7978	3.0000e-005	9.3000e-004	7.0761
Worker	3.8200e-003	2.7900e-003	0.0305	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4600e-003	4.0000e-005	2.5100e-003	0.0000	7.4204	7.4204	2.5000e-004	2.4000e-004	7.4971
Total	4.4600e-003	0.0179	0.0371	1.5000e-004	0.0116	2.5000e-004	0.0119	3.1400e-003	2.3000e-004	3.3800e-003	0.0000	14.2182	14.2182	2.8000e-004	1.1700e-003	14.5731

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0427	0.3904	0.4091	6.7000e-004		0.0202	0.0202		0.0190	0.0190	0.0000	57.9312	57.9312	0.0139	0.0000	58.2782
Total	0.0427	0.3904	0.4091	6.7000e-004		0.0202	0.0202		0.0190	0.0190	0.0000	57.9312	57.9312	0.0139	0.0000	58.2782

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	0.0151	6.6200e-003	7.0000e-005	2.3400e-003	2.0000e-004	2.5400e-003	6.8000e-004	1.9000e-004	8.7000e-004	0.0000	6.7978	6.7978	3.0000e-005	9.3000e-004	7.0761
Worker	3.8200e-003	2.7900e-003	0.0305	8.0000e-005	9.2800e-003	5.0000e-005	9.3300e-003	2.4600e-003	4.0000e-005	2.5100e-003	0.0000	7.4204	7.4204	2.5000e-004	2.4000e-004	7.4971
Total	4.4600e-003	0.0179	0.0371	1.5000e-004	0.0116	2.5000e-004	0.0119	3.1400e-003	2.3000e-004	3.3800e-003	0.0000	14.2182	14.2182	2.8000e-004	1.1700e-003	14.5731

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1966	1.7981	2.0305	3.3700e-003		0.0875	0.0875		0.0823	0.0823	0.0000	289.7559	289.7559	0.0689	0.0000	291.4791
Total	0.1966	1.7981	2.0305	3.3700e-003		0.0875	0.0875		0.0823	0.0823	0.0000	289.7559	289.7559	0.0689	0.0000	291.4791

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**3.5 Building Construction - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5900e-003	0.0629	0.0310	3.5000e-004	0.0117	6.1000e-004	0.0123	3.3800e-003	5.8000e-004	3.9600e-003	0.0000	32.9931	32.9931	1.4000e-004	4.5000e-003	34.3371
Worker	0.0176	0.0123	0.1397	3.9000e-004	0.0464	2.2000e-004	0.0466	0.0123	2.1000e-004	0.0125	0.0000	36.1221	36.1221	1.1300e-003	1.0900e-003	36.4745
Total	0.0202	0.0752	0.1707	7.4000e-004	0.0581	8.3000e-004	0.0589	0.0157	7.9000e-004	0.0165	0.0000	69.1152	69.1152	1.2700e-003	5.5900e-003	70.8116

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1966	1.7981	2.0305	3.3700e-003		0.0875	0.0875		0.0823	0.0823	0.0000	289.7556	289.7556	0.0689	0.0000	291.4788
Total	0.1966	1.7981	2.0305	3.3700e-003		0.0875	0.0875		0.0823	0.0823	0.0000	289.7556	289.7556	0.0689	0.0000	291.4788

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5900e-003	0.0629	0.0310	3.5000e-004	0.0117	6.1000e-004	0.0123	3.3800e-003	5.8000e-004	3.9600e-003	0.0000	32.9931	32.9931	1.4000e-004	4.5000e-003	34.3371
Worker	0.0176	0.0123	0.1397	3.9000e-004	0.0464	2.2000e-004	0.0466	0.0123	2.1000e-004	0.0125	0.0000	36.1221	36.1221	1.1300e-003	1.0900e-003	36.4745
Total	0.0202	0.0752	0.1707	7.4000e-004	0.0581	8.3000e-004	0.0589	0.0157	7.9000e-004	0.0165	0.0000	69.1152	69.1152	1.2700e-003	5.5900e-003	70.8116

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4712	0.4712	1.0000e-005	1.0000e-005	0.4758
Total	2.3000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4712	0.4712	1.0000e-005	1.0000e-005	0.4758

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.1600e-003	0.0510	0.0729	1.1000e-004		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	10.0134	10.0134	3.2400e-003	0.0000	10.0944

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4712	0.4712	1.0000e-005	1.0000e-005	0.4758
Total	2.3000e-004	1.6000e-004	1.8200e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4712	0.4712	1.0000e-005	1.0000e-005	0.4758

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9400e-003	0.0476	0.0731	1.1000e-004		2.3400e-003	2.3400e-003		2.1600e-003	2.1600e-003	0.0000	10.0133	10.0133	3.2400e-003	0.0000	10.0942
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.9400e-003	0.0476	0.0731	1.1000e-004		2.3400e-003	2.3400e-003		2.1600e-003	2.1600e-003	0.0000	10.0133	10.0133	3.2400e-003	0.0000	10.0942

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.4000e-004	1.6900e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4591	0.4591	1.0000e-005	1.0000e-005	0.4634
Total	2.1000e-004	1.4000e-004	1.6900e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4591	0.4591	1.0000e-005	1.0000e-005	0.4634

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9400e-003	0.0476	0.0731	1.1000e-004		2.3400e-003	2.3400e-003		2.1600e-003	2.1600e-003	0.0000	10.0133	10.0133	3.2400e-003	0.0000	10.0942
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.9400e-003	0.0476	0.0731	1.1000e-004		2.3400e-003	2.3400e-003		2.1600e-003	2.1600e-003	0.0000	10.0133	10.0133	3.2400e-003	0.0000	10.0942

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.4000e-004	1.6900e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4591	0.4591	1.0000e-005	1.0000e-005	0.4634
Total	2.1000e-004	1.4000e-004	1.6900e-003	0.0000	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4591	0.4591	1.0000e-005	1.0000e-005	0.4634

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.6042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	3.6060	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0300e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5509	0.5509	2.0000e-005	2.0000e-005	0.5560
Total	2.6000e-004	1.7000e-004	2.0300e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5509	0.5509	2.0000e-005	2.0000e-005	0.5560

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.6042					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	3.6060	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0300e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5509	0.5509	2.0000e-005	2.0000e-005	0.5560
Total	2.6000e-004	1.7000e-004	2.0300e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5509	0.5509	2.0000e-005	2.0000e-005	0.5560

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6110	0.9702	5.8663	0.0123	1.2794	0.0109	1.2904	0.3415	0.0103	0.3518	0.0000	1,154.952 1	1,154.952 1	0.0669	0.0618	1,175.052 5
Unmitigated	0.6110	0.9702	5.8663	0.0123	1.2794	0.0109	1.2904	0.3415	0.0103	0.3518	0.0000	1,154.952 1	1,154.952 1	0.0669	0.0618	1,175.052 5

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,208.32	1,221.12	1094.40	3,390,746	3,390,746
Total	1,208.32	1,221.12	1,094.40	3,390,746	3,390,746

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530590	0.056931	0.174803	0.137616	0.029294	0.007692	0.006155	0.022126	0.000483	0.000158	0.027801	0.000928	0.005423

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	180.7996	180.7996	0.0153	1.8500e-003	181.7323
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	180.7996	180.7996	0.0153	1.8500e-003	181.7323
NaturalGas Mitigated	0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640
NaturalGas Unmitigated	0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.62073e+006	0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640
Total		0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.62073e+006	0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640
Total		0.0195	0.1668	0.0710	1.0600e-003		0.0135	0.0135		0.0135	0.0135	0.0000	193.2159	193.2159	3.7000e-003	3.5400e-003	194.3640

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.01948e+006	180.7996	0.0153	1.8500e-003	181.7323
Total		180.7996	0.0153	1.8500e-003	181.7323

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.01948e+006	180.7996	0.0153	1.8500e-003	181.7323
Total		180.7996	0.0153	1.8500e-003	181.7323

6.0 Area Detail**6.1 Mitigation Measures Area**

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.3203	0.1678	10.8641	0.0180		1.3953	1.3953		1.3953	1.3953	132.2186	57.0030	189.2216	0.1235	0.0104	195.4085
Unmitigated	9.3203	0.1678	10.8641	0.0180		1.3953	1.3953		1.3953	1.3953	132.2186	57.0030	189.2216	0.1235	0.0104	195.4085

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3604					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0315	0.1569	9.9140	0.0180		1.3900	1.3900		1.3900	1.3900	132.2186	55.4506	187.6691	0.1220	0.0104	193.8187
Landscaping	0.0286	0.0110	0.9500	5.0000e-005		5.2700e-003	5.2700e-003		5.2700e-003	5.2700e-003	0.0000	1.5525	1.5525	1.4900e-003	0.0000	1.5897
Total	9.3203	0.1678	10.8640	0.0180		1.3953	1.3953		1.3953	1.3953	132.2186	57.0030	189.2216	0.1235	0.0104	195.4085

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3604					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0315	0.1569	9.9140	0.0180		1.3900	1.3900		1.3900	1.3900	132.2186	55.4506	187.6691	0.1220	0.0104	193.8187
Landscaping	0.0286	0.0110	0.9500	5.0000e-005		5.2700e-003	5.2700e-003		5.2700e-003	5.2700e-003	0.0000	1.5525	1.5525	1.4900e-003	0.0000	1.5897
Total	9.3203	0.1678	10.8640	0.0180		1.3953	1.3953		1.3953	1.3953	132.2186	57.0030	189.2216	0.1235	0.0104	195.4085

7.0 Water Detail

7.1 Mitigation Measures Water

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	32.2632	0.2743	6.7200e-003	41.1219
Unmitigated	32.2632	0.2743	6.7200e-003	41.1219

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.33972 / 5.25765	32.2632	0.2743	6.7200e-003	41.1219
Total		32.2632	0.2743	6.7200e-003	41.1219

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.33972 / 5.25765	32.2632	0.2743	6.7200e-003	41.1219
Total		32.2632	0.2743	6.7200e-003	41.1219

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.4608	1.8002	0.0000	75.4654
Unmitigated	30.4608	1.8002	0.0000	75.4654

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	150.06	30.4608	1.8002	0.0000	75.4654
Total		30.4608	1.8002	0.0000	75.4654

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	150.06	30.4608	1.8002	0.0000	75.4654
Total		30.4608	1.8002	0.0000	75.4654

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

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	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

Riverlux Resort - Mojave Desert AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**11.1 Vegetation Land Change****Vegetation Type**

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Others	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

APPENDIX D

Biological Resources Assessment

Riverlux Resort

BIOLOGICAL RESOURCES ASSESSMENT

May 2022

Prepared for:

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Prepared by:

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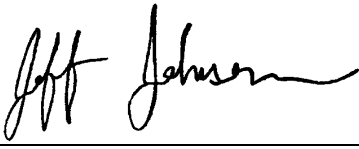


Biological Resources Assessment

for

RiverLux Resort

May 2022

Prepared By: 

Date: 05/10/22

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Table of Contents

1.0	Introduction	5
2.0	Project Location.....	5
3.0	Background	8
4.0	Methods.....	8
5.0	Results and Recommendations.....	9
6.0	References	19

List of Figures

Figure 1: Regional Location	7
Figure 2: Local Vicinity Map	7

List of Tables

Table 1: Special Status Plant Species Potentially Occurring within the Project Region	12
Table 2: Special Status Animal Species Potentially Occurring within the Project Region.....	12

List of Appendices

Appendix A: CNDDDB & USFWS Species Lists	20
Appendix B: Representative Site Photographs.....	22

1.0 Introduction

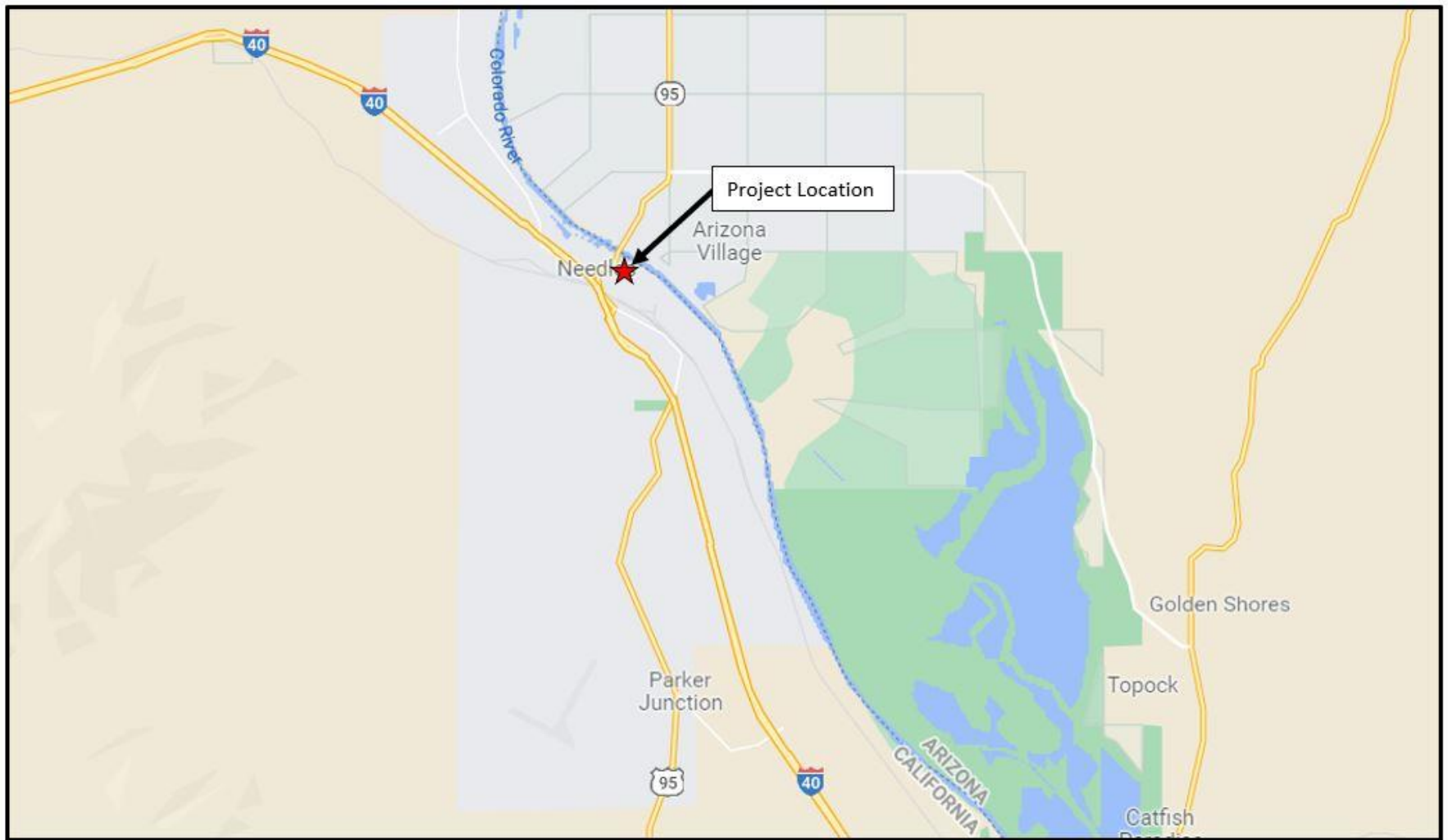
This report summarizes the findings of a biological resources assessment conducted by Pacific BioScience, Inc. on several parcels of land located at the intersection of North K Street and River Road in the City of Needles, California. Specific address for the project site is known as 429 North K Street, Needles, California.

This assessment consists of a general biological resources evaluation to identify commonly occurring flora, fauna, and plant communities as well as the potential for the proposed project site to support any special-status biological resources. The presence of features having potential to be under the jurisdiction of the Army Corps of Engineers (ACOE) or the California Department of Fish and Wildlife (CDFW), i.e. wetlands or waterways, was also determined and delineated however those findings are presented in a separate report (Riverlux Resort – Jurisdictional Determination).

The proposed project is known as RiverLux Resort and proposes to construct 56 townhomes and a commercial area. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 sq. ft. grocery store and one free-standing 20 ft. high digital billboard. The townhouses proposed for construction will consist of 58 single-family townhomes, which would accommodate parking for RV's. There will be three models being constructed within the proposed project area and consist of single-story, two-story, and three-story models. The proposed project will have five phases of construction until project completion.

2.0 Project Location

The project site is 14 acres in total size and located in the City of Needles, San Bernardino County, California (Exhibits 1 and 2). The site is known by the following parcels: San Bernardino County Assessor's Parcel Map Book 0660-301-13-0000, 0185-058-15-0000, 0185-067-15-0000, 0185-067-20-0000, 0186-021-01-0000 & 0185-109-48-0000. The property is mapped on U.S.G.S. 7.5 minute series topographical quadrangle map Needles in section Township 9 North, Range 23 East, Section 29. It is bounded by North K Street on the west, River Road on the east. The southern boundary of the project site is located just south of Needles Highway. A golf course occurs further to the south of the project site, residential and commercial development occurs to the west, and a trailer park occurs to the east with the Colorado River further to the east.



LEGEND



FIGURE 1
Project Location



LEGEND

Project Limits

Project Site

FIGURE 2
Project Limits

Pacific BioScience, Inc.

Background

The project site is 14 acres in total size and located in the City of Needles, San Bernardino County, California (Exhibits 1 and 2). The site is known by the following parcels: San Bernardino County Assessor's Parcel Map Book 0660-301-13-0000, 0185-058-15-0000, 0185-067-15-0000, 0185-067-20-0000, 0186-021-01-0000 & 0185-109-48-0000. The property is mapped on U.S.G.S. 7.5 minute series topographical quadrangle map Needles in section Township 9 North, Range 23 East, Section 29. It is bounded by North K Street on the west, River Road on the east. The southern boundary of the project site is located just south of Needles Highway. A golf course occurs further to the south of the project site, residential and commercial development occurs to the west, and a trailer park occurs to the east with the Colorado River further to the east.

4.0 Methods

Literature Review

Prior to visiting the project site, a review of the California Natural Diversity Data Base (CNDDB) and Biogeographic Information Observation System (BIOS) was conducted to identify if any special-status plant and animal species are known to occur within in the vicinity. These databases identify recorded locations of special-status plant and animal species in the project vicinity and, therefore, having the potential to occur on the project site. Also reviewed prior to a site visit were U.S. Fish and Wildlife Service Critical Habitat Portal online mapper to determine the presence of designated critical habitat, aerial photographs, and relevant USGS 7.5-minute topographical quadrangles. The CNDDB and USFWS species lists are attached in Appendix A.

Field Survey Methodology

Pacific BioScience Inc. biologists, Andrew Johnstone, Robert Schallmann, and Jeff Johnson, conducted site visits on May 22, 29, July 23, August 18 and September 22, 2021 between the hours of 0730 and 1700 each day. During site visits in May the skies were clear with temperatures in the 90's, during June the daytime temperature reached 100, and in August temperature were well above 100. The survey conducted in September was during clear skies with temperature in the 90's to 100. These temperatures are typical for the time of year and day. The entire project site was traversed on foot on each of the visits for assessment of the habitat and identification of common and special-status plant and wildlife species.

Plant communities were noted on aerial photographs and all plant species observed were noted in a field notebook. Results of a focused special-status plant survey can be found in a separate report titled “Riverlux Resort - Focused Plant Survey”.

Site visits also included identification of any potential wetlands or waterways under jurisdiction of the Army Corp of Engineers, California Department of Fish and Wildlife, or California Regional Water Quality Control Board. However, this determination and delineation information is noted in a separate report titled “Riverlux Resort - Jurisdictional Delineation”.

5.0 Results and Recommendations

Literature Review

A search of the USFWS Critical Habitat Portal revealed that the project does not contain critical habitat for any federal-listed species (USFWS 2018). The project site does not occur within any refuges; however, it is located near the Colorado River. Because of its proximity to the Colorado River, The Lower Colorado River Multi-Species Habitat Conservation Program and the species covered by that program were reviewed and evaluated.

Based on the most recent version of the CNDDB (CDFW 2022), no special-status habitats are known to occur within the project limits. There are recorded occurrences of 1 special-status plant species and 37 special-status wildlife species within the vicinity of the proposed project.

Existing Conditions

The project site is highly disturbed from OHV use, transients, several existing dirt access roads within the project limits, and minor amounts of illegal residential and commercial dumping. See Appendix B for photo log.

Soils

No digital data was available for the action area generated through the NRCS Web Soils Survey. Based off observation through site visits and knowledge of the surrounding area, the soils consist of very deep excessively drained soils that appear to form in stratified stream alluvium akin to Lagunita sand (definition of which is detailed below).

71- Lagunita sand, 0 to 1 percent slopes: consists of very deep, excessively drained soils that form in stratified stream alluvium from mixed sources. These soils are found at elevations between 75 to 1,400 feet.

Field Survey

Plant Communities

The project site contains three plant communities: four-wing saltbush scrub, mesquite thicket, and tamarisk thicket. A complete description of plant communities are based on Sawyer and Keeler-Wolf A Manual of California Vegetation, 2nd Edition (2014) and are provided below.

Four-wing Saltbush Scrub

Four-wing saltbush (*Atriplex canescens* shrubland alliance) scrub community is dominated by a single species of saltbush, the four-wing saltbush. Four-wing saltbush scrub is a low-growing plant community with shrubs typically less than three feet (one meter) in height. This community is usually found on fine-textured, poorly- drained soils with high alkalinity and/or salinity. Additional shrub species present within the fourwing saltbush scrub within the BSA included allscale saltbush (*Atriplex polycarpa*), bush seepweed (*Suaeda moquinii*), creosote (*Larrea tridentata*), and tamarisk. This community was observed throughout the BSA and accounts for approximately 12.86 acres.

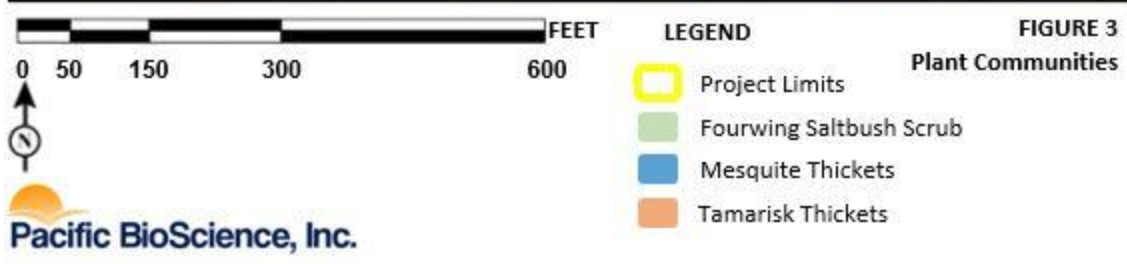
Mesquite thicket

Mesquite thicket (*Prosopis glandulosa*) consists of stands of this shrub that occurs in sand dunes or rarely flooded margins of arroyos or washes. This species was found occasionally throughout the BSA with a defined thicket at the southern edge of the BSA amounting to approximately 0.51 acres.

Tamarisk thicket

Tamarisk (*Tamarix ramosissima*) consists of stands of this invasive shrub that occurs in arroyo margins, lake margins, ditches, washes, rivers, and other water courses. Two distinct thickets were observed within the BSA and amount to approximately 0.45 acres.

A visual representation of the plant communities observed within the proposed project site is below as Figure 3.



Plant Species

The following plants were observed within the project site: four-wing saltbush (*Atriplex canescens*), big saltbush (*Atriplex lentiformes*), mustard (*Brassica* sp.), button brittlebush (*Encelia frutescens*), creosote bush (*Larrea tridentata*), blue paloverde (*Parkinsonia florida*), honey mesquite (*Prosopis glandulosa*), bush seepweed (*Suaeda monquini*), and *Tamarisk* sp.

One special-status plant, spiny-hair blazing star (*Mentzelia tricuspidis*) is noted in California Natural Diversity Database (CNDDB) as occurring within the region of the project site (CDFW 2022). Below is a description of habitat requirements of this special-status plant. A focused plant survey was conducted to look for the presence of this special-status plant species and none were found. See the focused plant survey for details of this study.

Table 1: Special Status Plant Species Potentially Occurring within the Project Region

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
PLANTS				
<i>Mentzelia tricuspidis</i> Spiny-hair blazing star	CNPS List 2B.1	Mojavean desert scrub; sandy or gravelly slopes and washes, 150-1280 m.	Marginal suitable habitat occurs on site. Low quality disturbed habitat.	Low potential to occur. Not observed during survey.

Special-status Wildlife

California Department of Fish and Wildlife CNDDB and US Fish and Wildlife databases were researched to determine special-status species known to occur within the vicinity of the site, and therefore with potential to occur on the site. Also, wildlife species covered by the Lower Colorado Multi-species Habitat Conservation Program were considered. Below is a table of all species evaluated with discussion further below for species that have potential to occur on site. A total of 37 special-status wildlife species (1 invertebrate, 4 fishes, 3 amphibians, 3 reptiles, 15 birds, and 10 bats) are noted as occurring within the region of the project site (US F&WS 2018) (CDFW 2018) (LCR MSHCP 2018).

Table 2: Special Status Animal Species Potentially Occurring within the Project Region

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
INVERTEBRATES				

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Hesperopsis gracielae</i> MaNeill's sootywing	CA: S1	Requires dense stands of quailbush.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
FISHES				
<i>Catostomus latipinnis</i> Flannelmouth sucker	CA S1 Sensitive	Colorado River. Spawns in riffles.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Gila cypha</i> Humpback chub	US: FE	Colorado River.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Gila elegans</i> Bonytail	US: FE CA: SE	Colorado River.	No habitat present.	Not expected to occur, therefore no effect on species.
<i>Xyrauchen texanus</i> Razorback sucker	US: FE CA: SE	Colorado River. Spawns in sand gravel rocks.	No habitat present.	Not expected to occur, therefore no effect on species.
AMPHIBIANS				
<i>Bufo Incilus alvarius</i> Colorado River toad	LCR MSHCP listed.	Requires ponds, slow- moving streams, temporary pools.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Rana Lithobates onca</i> Relict leopard frog	LCR MSHCP listed.	Found in Back Canyon Virgin River.	Outside known range.	Not expected to occur, therefore no effect on species.
<i>Rana Lithobates yavapaiensis</i> Lowland leopard frog	BLM sensitive; LCR MSHCP listed.	Permanent and intermittent streams, sloughs, beaver ponds.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
REPTILES				

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Gopherus agassizii</i> Desert tortoise	US: FT CA: ST	Historically found throughout the Mojave and Sonoran Deserts into Arizona, Nevada, and Utah. Occurs throughout the Mojave Desert in scattered populations. Found in creosote bush scrub, saltbush scrub, thornscrub (in Mexico), and Joshua tree woodland. Found in the open desert as well as in oases, riverbanks, washes, dunes, and occasionally rocky slopes.	Marginal suitable habitat present.	No sign observed during site visits. A focused survey may be required prior to initial site construction.
<i>Phrynosoma mcalli</i> Flat-tailed horn lizard	CDFW: SSC	Sandy flats associated with creosote scrub. Range is Sonoran desert from Coachella Valley south to Mexican border.	Marginal suitable habitat present but outside of known range.	Not expected to occur, therefore no effect on species.
<i>Thamnophis eques megalops</i> Northern Mexican gartersnake	US: FT	Found near permanent water sources and thick dense bank vegetation.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
BIRDS				
<i>Athene cunicularia</i> Burrowing owl	CDFW: SSC BLM: S	Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, margins of highways, golf courses, and airports. Resident over most of southern California (sparsely distributed over desert areas).	Suitable foraging habitat present. Not observed during focused surveys. No suitable burrows observed.	Potential to occur. Not observed during site visits.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	US: Threatened CA: SE BLM: S (Nesting sites are protected.)	Riparian obligate species primarily with willow-cottonwood riparian forests, but other species occur in alder and box elder dominated riparian habitats	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Colaptes chrysoides</i> Gilded flicker	CA: SE	Mature saguaro cactus.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Icteria virens</i> Yellow-breasted chat	CDFW: SSC	Riparian willow thickets.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Ixobrychus exilis</i> Least bittern	CDFW: SSC	Freshwater and brackish marshes.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Laterallus jamaicensis cotumiculus</i> California black rail	CA: ST	Tidal and freshwater marshes.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Melanerpes uropygialis</i> Gila woodpecker	CA: SE BLM: Sensitive	Cottonwood and other desert riparian. Cavity nester in riparian trees or saguaro cactus.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Micranthene whitneyi</i> Elf owl	CA: SE BLM: Sensitive	Cottonwood willow and mesquite riparian along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Myiarchus tyrannulus</i> Brown-crested flycatcher	CDFW: Watch list	Riparian thickets along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Piranga rubra</i> Summer tanager	CDFW: SSC	Occur along streams among willows, cottonwoods, mesquite, or saltcedar	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Pyrocephalus rubinus</i> Vermillion flycatcher	CDFW: SSC	Cottonwood, willow, mesquite and other desert riparian.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Rallus obsoletus yumanensis</i> Yuma Ridgway's rail	US: FE CA: ST, Fully protected	Fresh water marshes along Colorado River.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Toxostoma crissale</i> Crissal thrasher	CDFW: SSC	Desert riparian, dense vegetation along streams.	Suitable habitat is not present	Not expected to occur, therefore no effect on species.
<i>Vireo bellii arizonae</i> Arizona Bell's vireo	CA: SE BLM: S	Summer resident along Colorado River, willow thickets.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Setophaga petechia sonorana</i> Sonoran yellow warbler	CA: SSC	Summer resident of Colorado River, riparian, cottonwoods, willows.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
MAMMALS				

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
<i>Antrozous pallidus</i> Pallid bat	CDFW: SSC BLM: S	Deserts, grasslands, shrublands, woodlands and forests, in open dry habitat with rocky areas for roosting.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	CA: CT CDFW: SSC BLM: S USFS: S	Coniferous forests and woodlands, semi-desert and montane shrublands	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Chaetodipus penicillatus sobrinus</i> Desert pocket mouse	LCR MSHCP: Listed	Desert areas with coarse vermiculite soils and clumped brush habitat. Avoid open desert scrub areas due to lack of cover.	Suitable habitat is not present.	Not expected to occur, therefore no effect on species.
<i>Lasiurus blossevillii</i> Western red bat	CA: SSC, Candidate	Desert riparian. Roosts in trees.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Lasiurus xanthinus</i> Western yellow bat	CA: SSC	Desert riparian. Roosts in trees.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Lontra Canadensis Sonora</i> Southwestern river otter	CA: SSC	Aquatic habitat along the Colorado River.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Macrotis californicus</i> California leaf-nosed bat	BLM: S CA: SSC	Foraging occurs in desert washes with mesquite, ironwood, Palo verde, catclaw, smoketree.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Ovis Canadensis nelson</i> Desert bighorn sheep	CDFW: Fully protected BLM: S	Open, steep rocky terrain.	Suitable habitat not present.	Not expected to occur, therefore no effect on species.
<i>Sigmodon arizonae plenus</i> Colorado River cotton rat	CDFW: SSC	Grass cattail habitat with developed herbaceous understory.	Suitable not habitat present.	Not expected to occur, therefore no effect on species.
<i>Sigmodon hispidus eremicus</i> Yuma Hispid cotton rat	CDFW: SSC	Backwater habitat along the Colorado River.	Suitable not habitat present.	Not expected to occur, therefore no effect on species.

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
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Designations:

US: United States

CA: California

FE – Federally Endangered

FT – Federally Threatened

SE – State Endangered

ST – State Threatened

CT – Candidate Threatened

CDFW: SSC – Species of Special Concern

CDFW: FP – Fully Protected

CDFW: WL – Watch List

BLM: S – Sensitive

USFS: S – Sensitive

WBWG: M – Medium Priority

As stated above, two special-status wildlife species have the potential to occur within the limits of the project and therefore have a potential to be impacted with the implementation of the proposed project. All other species are not further discussed beyond the extent of the table above because no impact to those species is expected.

Desert tortoise (*Gopherus agassizii*) – (Federal: threatened; California: threatened). The proposed project site lies within the known range of the desert tortoise (DT). Focused protocol surveys may be required due to potential for occurrence. This focused survey would be required within one year prior to initial site construction, including clearing and grubbing of the site. If individuals are found on the site in the future, U.S. Fish and Wildlife Service and California Department of Fish and Game shall be contacted immediately for consultation prior to work commencing.

Burrowing owl (*Athene cunicularia*) – (Federal: None; California: Species of Special Concern). This species occurs in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. It is a subterranean nester that is dependent upon burrowing mammals, most notably the California ground squirrel. Marginal suitable habitat occurs on site. Although no individuals or their sign were observed, individuals could occur on the site in the future prior to clearing and grubbing. Pre-construction surveys shall be conducted. If individuals are noted in the future, California Department of Fish and Game shall be contacted immediately for consultation prior to work commencing.

Nesting Birds

Suitable habitat for raptors and other migratory birds was noted within and adjacent to the project site. All but two nesting birds are protected under Section 3503 of the Fish and Game Code (FGC), and raptors specifically are protected under Section 3503.5 of the FGC. Additionally, both the Migratory Bird Treaty Act and Section 3513 of the FGC prohibit the take or trading of migratory birds. The nesting period for raptors and other migratory birds is generally recognized by resource agencies as February 15 to August 31. Construction activities that occur during the

nesting season could disturb active nests if construction occurs within 500 feet of an active raptor nest and approximately 150 feet for other migratory birds. Impacts to potential avian nesting habitat should be avoided during nesting season, if feasible. If avoidance is not feasible, a minimum of four pre-construction nesting surveys site visits, within 30 days of start of site clearing with the last visit no more than three days prior. No action is necessary if no active nests are found or if construction will occur during the non-breeding season (generally September 1 through February 14).

Jurisdictional Features

The proposed project site was evaluated for the presence of features that would fall under state and federal jurisdiction. For information regarding the potential for jurisdictional features please see the report titled RiverLux Resort Jurisdictional Determination, May 2022.

6.0 References

California Department of Fish and Game (CDFG). 2005. Biogeographic Information and Observation System (BIOS 5). Website: <https://map.dfg.ca.gov/bios/>. Accessed December 5, 2021.

California Department of Fish and Wildlife (CDFW). 2022. CNDDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>. Accessed December 5, 2021.

California Native Plant Society (CNPS). 2015. Rare Plant Program. Website: <http://www.rareplants.cnps.org>. Accessed December 5, 2021.

Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California, Sacramento: California Department of Fish and Wildlife.

Soil Survey Staff. 2015. Natural Resources Conservation Service: Official Soil Series Descriptions. Website: <http://www.nrcs.usda.gov/>. Accessed December 5, 2021.

United States Fish and Wildlife Service (USFWS). 2011. Environmental Conservation Online System: U.S. FWS Threatened and Endangered Species Active Critical Habitat Report (online mapper). Website: <http://ecos.fws.gov/ecp/report/table/critical-habitat.html>. Accessed December 5, 2021.

United States Geological Survey (USGS). 2012. Needles, California 7.5-Minute Topographic Quadrangle Map. Washington, D.C.: U.S. Government Printing Office.

Appendix A: CNDDDB and USFWS Species Lists



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06545	EO Index:	26426
Key Quad:	Flattop Mtn. (3411477)	Element Code:	ABNKD06090
Occurrence Number:	60	Occurrence Last Updated:	1989-08-10

Scientific Name:	<i>Falco mexicanus</i>	Common Name:	prairie falcon
Listing Status:	Federal: None	Rare Plant Rank:	
* SENSITIVE *	State: None	Other Lists:	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern
CNDDDB Element Ranks:	Global: G5		
	State: S4		

General Habitat:	Micro Habitat:
INHABITS DRY, OPEN TERRAIN, EITHER LEVEL OR HILLY.	BREEDING SITES LOCATED ON CLIFFS. FORAGES FAR AFIELD, EVEN TO MARSHLANDS AND OCEAN SHORES.

Last Date Observed:	1977-06-03	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1977-06-03	Occurrence Rank:	Unknown
Owner/Manager:		Trend:	Unknown
Presence:	Presumed Extant		

Location:

SENSITIVE LOCATION INFORMATION SUPPRESSED.

Detailed Location:

PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological:

Threats:

General:

PLSS:	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Latitude/Longitude:		Elevation (feet):	2,400

County Summary:	Quad Summary:
San Bernardino	Needles SW (3411476), Flattop Mtn. (3411477)

Sources:

DFG81U0003 CALIFORNIA DEPARTMENT OF FISH & GAME - SWAINSON'S HAWK & PRAIRIE FALCON NEST RECORDS FROM FILES AT DFG NONGAME WILDLIFE INVESTIGATIONS (WILDLIFE BRANCH); NOT AT CNDDDB. 1981-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06633	EO Index:	14746
Key Quad:	Needles (3411475)	Element Code:	ABNME0501A
Occurrence Number:	2	Occurrence Last Updated:	2011-09-13

Scientific Name:	<i>Rallus obsoletus yumanensis</i>	Common Name:	Yuma Ridgway's rail
Listing Status:	Federal: Endangered State: Threatened	Rare Plant Rank:	
CNDDDB Element Ranks:	Global: G3T3 State: S1S2	Other Lists:	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List

General Habitat:	Micro Habitat:
NESTS IN FRESHWATER MARSHES ALONG THE COLORADO RIVER AND ALONG THE SOUTH AND EAST ENDS OF THE SALTON SEA.	PREFERS STANDS OF CATTAILS AND TULE DISSECTED BY NARROW CHANNELS OF FLOWING WATER; PRINCIPLE FOOD IS CRAYFISH.

Last Date Observed:	2009-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2009-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	USFWS-HAVASU NWR, UNKNOWN	Trend:	Stable
Presence:	Presumed Extant		

Location:
TOPOCK MARSH, THREEMILE LAKE, AND CHANNELS, ON ARIZONA SIDE OF COLORADO RIVER, LAKE HAVASU NWR.

Detailed Location:
TOPOCK MARSH INCL TOPOCK BAY, SACRAMENTO WASH DELTA, LOST LAKE, LOST LAKE CHANNELS, BEAL LAKE, BEAL LAKE CHANNEL, WILLOW LAKE, LOWER GOOSE LAKE, THE GLORY HOLE, HERON LAKE, 1ST, 2ND, 3RD FINGER, NARROW FINGER, ROADSIDE FINGERS & NORTH ARM.

Ecological:
RAILS FIRST OBSERVED BY WELCH ON THIS SITE IN 1966. ONE OF THE MAJOR COLORADO RIVER BREEDING AREAS. RAILS FROM THIS AREA FORAGE, WINTER AND/OR BREED. 1,620 HECTARE LAKE OF DROWNED MESQUITE WITH EXTENSIVE STANDS OF CATTAIL AND BULRUSH.

Threats:
DAM CONSTRUCTION, WATER DIVERSION, AND CHANNELIZATION.

General:
MARSH AREAS HAVE BEEN KNOWN TO SUPPORT YCR HABITAT & WERE CONSISTENTLY STUDIED BY VARIOUS AGENCIES BTWN 1966-2009 AS TOPOCK MARSH & HAVASU NWR. DETECTIONS VARIED FROM 1-120 DEPENDING ON YEAR & SURVEY LOCATION. 2 AT THE GLORY HOLE IN 2009.

PLSS:	T99X, R99X, Sec. UN (X)	Accuracy:	non-specific area	Area (acres):	10,156
UTM:	Zone-11 N3851922 E725617	Latitude/Longitude:	34.78456 / -114.53424	Elevation (feet):	455

County Summary:	Quad Summary:
San Bernardino, Arizona State	Topock (3411464), Whale Mtn. (3411465), Needles (3411475)



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Sources:

CHM05R0001	CH2M HILL - BIOLOGICAL RESOURCES SURVEY REPORT FOR THE AREA OF POTENTIAL EFFECT TOPOCK COMPRESSOR STATION EXPANDED GROUNDWATER EXTRACTION AND TREATMENT SYSTEM NEEDLES, CALIFORNIA. 2005-10-XX
CON02R0002	CONWAY, C. ET AL. (U.S. BUREAU OF RECLAMATION) - POPULATION TRENDS, DISTRIBUTION, AND MONITORING PROTOCOLS FOR THE CALIFORNIA BLACK RAIL (FINAL REPORT) 2002-01-10
FWS06R0002	U.S. FISH & WILDLIFE SERVICE - YUMA CLAPPER RAIL 5-YEAR REVIEW 2006 (PERIOD COVERED BY REVIEW: 2000-2005). 2006-05-30
FWS83R0007	U.S. FISH & WILDLIFE SERVICE - YUMA CLAPPER RAIL RECOVERY PLAN, FINAL. 1983-02-04
GOU75R0001	GOULD, G. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - YUMA CLAPPER RAIL STUDY - CENSUSES AND HABITAT DISTRIBUTION, 1973-74 (REPORT NO. 75-2). 1975-04-XX
MCN10R0001	MCNEIL, S. ET AL. (SOUTHERN SIERRA RESEARCH STATION) - YELLOW-BILLED CUCKOO DISTRIBUTION, ABUNDANCE AND HABITAT USE ON THE LOWER COLORADO RIVER AND TRIBUTARIES, 2009 ANNUAL REPORT 2010-06-XX
OHM73R0001	OHMART, R.D. & R.W. SMITH - "NORTH AMERICAN CLAPPER RAIL (RALLUS LONGIROSTRIS) LITERATURE SURVEY WITH SPECIAL CONSIDERATION BEING GIVEN TO THE PAST AND CURRENT STATUS OF YUMANENSIS" (BUREAU OF RECLAMATION) 1973-XX-XX
POW84R0001	POWELL, R.E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-BLYTHE) - COLORADO RIVER / YUMA RIVER CLAPPER RAIL SURVEY - 1984 RESULTS AND DISCUSSION. 1984-XX-XX
POW85U0001	POWELL, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-BLYTHE) - TELEPHONE CONVERSATION WITH CARRIE SHAW, CNDDDB, REGARDING ARIZONA POPULATION OF YUMA CLAPPER RAIL AT TOPOCK MARSH, OCCURRENCE #2 1985-05-03
POW85U0002	POWELL, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-BLYTHE) - MAPS AND LETTERS DESCRIBING THE CURRENT STATUS OF THE YUMA CLAPPER RAIL (3 SETS OF MAPS). 1985-12-04
POW90U0001	POWELL, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - YUMA CLAPPER RAIL CENSUS SUMMARY (1990). 1990-XX-XX
SMI73R0001	SMITH, P.M. - YUMA CLAPPER RAIL STUDY, MOHAVE COUNTY, AZ. (TOPOCK MARSH). CDFG ADMINISTRATIVE REPORT; JUNE 1984. 1973-XX-XX
TOM73A0001	TOMLINSON, R. & R. TODD - DISTRIBUTION OF TWO WESTERN CLAPPER RAIL RACES AS DETERMINED BY RESPONSES TO TAPED CALLS. THE CONDOR 75:177-183. 1973-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06615	EO Index:	14710
Key Quad:	Needles (3411475)	Element Code:	ABNRB02022
Occurrence Number:	114	Occurrence Last Updated:	2015-05-15

Scientific Name:	<i>Coccyzus americanus occidentalis</i>	Common Name:	western yellow-billed cuckoo
Listing Status:	Federal: Threatened State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T2T3 State: S1	Other Lists:	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern

General Habitat:

RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.

Micro Habitat:

NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, WITH LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Last Date Observed:	1986-06-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2009-07-02	Occurrence Rank:	Unknown
Owner/Manager:	USBOR, USFWS-HAVASU NWR	Trend:	Unknown
Presence:	Presumed Extant		

Location:

HAVASU NATIONAL WILDLIFE REFUGE, MOJAVE VALLEY, SE OF NEEDLES ALONG COLORADO RIVER BETWEEN TOPOCK MARSH AND I-40.

Detailed Location:

GAINES SITE CR2, 1977. 1996-2001 LOCATION GIVEN ONLY AS "LAKE HAVASU." SURVEYS FROM 2007 ("TOPOCK MARSH RESTORATION") & 2009 ("TOPOCK PLATFORM HAVTPR") AT 21 ACRE RESTORATION SITE ON AZ SIDE VICINITY OF SECTION 15.

Ecological:

HABITAT CONSISTED OF FREMONT COTTONWOOD AND GOODDINGS WILLOW SURROUNDED BY SALT CEDAR WITH A MESQUITE RESTORATION PLOT ADJACENT TO THE SITE. TAMARISK, ARROWWEED, AND AGRICULTURAL FIELD SURROUNDED THE SITE. NO STANDING WATER IN 2007.

Threats:

General:

7 OBSERVED (POSSIBLY NESTING), 1977. 1 OBSERVED 10 JUN 1983. 1 UNMATED MALE & 2 PAIRS (1 WITH CONFIRMED NEST) OBSERVED 28 JUN 1986. 0 FOUND IN 1996 & 1997. DETECTED IN 1998, 2000, & 2001. 1+ OBSERVED 12 JUN-27 JUL 2007. 1 OBS 2 JUL 2009.

PLSS:	T16N, R22W, Sec. 01 (G)	Accuracy:	specific area	Area (acres):	2,857
UTM:	Zone-11 N3852933 E723245	Latitude/Longitude:	34.79419 / -114.55987	Elevation (feet):	470

County Summary:

San Bernardino, Arizona State

Quad Summary:

Needles (3411475)

Sources:

GAI77R0001	GAINES, D. - CURRENT STATUS AND HABITAT REQUIREMENTS OF THE YELLOW-BILLED CUCKOO IN CALIFORNIA. ENDANGERED WILDLIFE PROJECT. E-1-1. CALIFORNIA DEPARTMENT OF FISH AND GAME. 1977-XX-XX
GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
HUN83F0029	HUNTER, W. - FIELD SURVEY FORM FOR COCCYZUS AMERICANUS OCCIDENTALIS 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
JOH08R0001	JOHNSON, M. ET AL. (U.S. GEOLOGICAL SURVEY) - YELLOW-BILLED CUCKOO DISTRIBUTION, ABUNDANCE, AND HABITAT USE ALONG THE LOWER COLORADO RIVER AND ITS TRIBUTARIES, 2007 ANNUAL REPORT. 2008-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
MCK02U0001	MCKERNAN, R. & G. BRADEN (SAN BERNARDINO COUNTY MUSEUM) - STATUS, DISTRIBUTION AND HABITAT AFFINITIES OF THE SOUTHWESTERN WILLOW FLYCATCHER ALONG THE LOWER COLORADO RIVER, YEAR 6 - 2001 2002-05-XX
MCN10R0001	MCNEIL, S. ET AL. (SOUTHERN SIERRA RESEARCH STATION) - YELLOW-BILLED CUCKOO DISTRIBUTION, ABUNDANCE AND HABITAT USE ON THE LOWER COLORADO RIVER AND TRIBUTARIES, 2009 ANNUAL REPORT 2010-06-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	64822	EO Index:	64901
Key Quad:	Needles (3411475)	Element Code:	ABNSB10010
Occurrence Number:	810	Occurrence Last Updated:	2006-06-06

Scientific Name:	<i>Athene cunicularia</i>	Common Name:	burrowing owl
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G4 State: S3	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.	SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed:	2005-04-11	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2005-04-11	Occurrence Rank:	Excellent
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
1.1 MILE SE OF THE INTERSECTION OF I-40 AND HIGHWAY 95 (EAST BROADWAY STREET), SOUTH EDGE OF NEEDLES.

Detailed Location:
Ecological:
HABITAT CONSISTS OF CREOSOTE BUSH SCRUB ON SANDY/ROCKY SOILS; BURROW SITS ON THE EAST-FACING SLOPE OF A HILL.

Threats:
THREATENED BY PRIVATE DEVELOPMENT.
General:
2 ADULTS OBSERVED AT AN ACTIVE BURROW SITE ON 11 APR 2005.

PLSS:	T08N, R23E, Sec. 04, SW (S)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-11 N3854732 E720841	Latitude/Longitude:	34.81091 / -114.58565	Elevation (feet):	550

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:
DAV05F0001 DAVENPORT, A. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-04-11



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	64823	EO Index:	64902
Key Quad:	Needles (3411475)	Element Code:	ABNSB10010
Occurrence Number:	811	Occurrence Last Updated:	2006-06-06

Scientific Name:	<i>Athene cunicularia</i>	Common Name:	burrowing owl
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G4 State: S3	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.	SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed:	2005-07-01	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2005-07-01	Occurrence Rank:	Good
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
0.25 MILE ENE OF THE INTERSECTION OF I-40 AND HIGHWAY 95 (EAST BROADWAY STREET), SOUTH EDGE OF NEEDLES.

Detailed Location:
Ecological:
HABITAT CONSISTS OF CREOSOTE BUSH SCRUB ON SANDY/ROCKY SOILS; BURROW SITS ON THE NORTH-FACING SLOPE OF A BANK.

Threats:
THREATENED BY PRIVATE DEVELOPMENT.

General:
2 ADULTS OBSERVED AT AN ACTIVE BURROW SITE ON 11 APR 2005; 3 FLEDGLINGS WERE OBSERVED ON 1 JUL 2005.

PLSS:	T09N, R23E, Sec. 32, SE (S)	Accuracy:	80 meters	Area (acres):	0
UTM:	Zone-11 N3856311 E720168	Latitude/Longitude:	34.82529 / -114.59259	Elevation (feet):	523

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:
DAV05F0002 DAVENPORT, A. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-04-11



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	A5598	EO Index:	107339
Key Quad:	Needles (3411475)	Element Code:	ABNSB10010
Occurrence Number:	2008	Occurrence Last Updated:	2017-07-31

Scientific Name:	<i>Athene cunicularia</i>	Common Name:	burrowing owl
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G4 State: S3	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.	SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed:	2016-11-18	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2016-11-18	Occurrence Rank:	Good
Owner/Manager:	SBD COUNTY	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ABOUT 0.2 MILES SW OF SAN CLEMENTE ST AT CLARY DR AND 1.0 MILES SW OF I-40 AT D ST IN NEEDLES.

Detailed Location:
MAPPED TO PROVIDED COORDINATES.

Ecological:
BURROW IN DESERT CREOSOTE SCRUB NEAR LEVEE USED FOR STORM WATER CONTROL, AND NEAR URBAN DEVELOPMENT.

Threats:
DEVELOPMENT.

General:
1 ADULT PERCHED AT ENTRANCE TO BURROW OBSERVED ON 18 NOV 2016. FURTHER FIELDWORK NEEDED TO DETERMINE EXTENT OF OVERWINTERING USE AT SITE.

PLSS:	T09N, R23E, Sec. 31, SE (S)	Accuracy:	80 meters	Area (acres):	5
UTM:	Zone-11 N3855942 E717977	Latitude/Longitude:	34.82244 / -114.61663	Elevation (feet):	679

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:
STR16F0005 STRATTON, G. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA [SC-013417]. 2016-11-18



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	85529	EO Index:	14702
Key Quad:	Needles (3411475)	Element Code:	ABNYF04150
Occurrence Number:	7	Occurrence Last Updated:	2012-05-16

Scientific Name:	<i>Melanerpes uropygialis</i>	Common Name:	Gila woodpecker
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S1	Other Lists:	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.	CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed:	2009-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2009-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	USFWS-HAVASU NWR	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ABOUT 2.25 MI SE HWY 40 AT HWY 95, W OF TOPOCK MARSH, AND E SIDE OF COLORADO RIVER, HAVASU NWR.

Detailed Location:
MAPPED TO NORTHERN SECTION OF 2009 YBCU SURVEY HAVLR SITE. 1977: GAINES BOAT SURVEY CR1 SITE, NEEDLES TO BEAL LAKE. 1986: W SIDE TOPOCK MARSH SURVEYED FROM NEEDLES TO BEAL SLOUGH.

Ecological:
MIXED NATIVE HABITAT, OVERSTORY GOODDING'S WILLOW, TAMARISK, MESQUITE; RESTORED NATIVE HABITAT WITH COTTONWOOD & WILLOW.

Threats:

General:

UP TO 3 DETECTED 1 AUG 1977. 6-14 BIRDS ESTIMATED DURING SUMMER 1986 SURVEY. UNKNOWN NUMBER DETECTED DURING YBCU SURVEY IN SUMMER 2009.

PLSS:	T99X, R99X, Sec. UN (X)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-11 N3853409 E722280	Latitude/Longitude:	34.79868 / -114.57028	Elevation (feet):	465

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:	
GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
MCN10R0001	MCNEIL, S. ET AL. (SOUTHERN SIERRA RESEARCH STATION) - YELLOW-BILLED CUCKOO DISTRIBUTION, ABUNDANCE AND HABITAT USE ON THE LOWER COLORADO RIVER AND TRIBUTARIES, 2009 ANNUAL REPORT 2010-06-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06605	EO Index:	25408
Key Quad:	Needles (3411475)	Element Code:	ABNYF04150
Occurrence Number:	15	Occurrence Last Updated:	2012-04-11

Scientific Name:	<i>Melanerpes uropygialis</i>	Common Name:	Gila woodpecker
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S1	Other Lists:	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.	CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed:	1983-04-21	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1983-04-21	Occurrence Rank:	Unknown
Owner/Manager:	PVT	Trend:	Unknown
Presence:	Presumed Extant		

Location:
E END OF NEEDLES MUNICIPAL GOLF COURSE, ABOUT 1 MI N OF I-40 AT E BROADWAY ST, NEEDLES.

Detailed Location:
MAPPED TO 1983 MAP AND TRS. 1910: MVZ RECORD LOCATION GIVEN AS "COLORADO RIVER, NEEDLES, SAN BERNARDINO CA." GEOREFERENCED LOCATION BY MVZ ARE IN DOWNTOWN NEEDLES. LOCALITY OF USNM, CAS SPECIMENS IS "NEEDLES."

Ecological:
GOLF COURSE WITH WILLOW-SALT CEDAR ASSOCIATION.

Threats:
SITE BOUNDED ON ALL SIDES BY DEVELOPMENT.

General:
2 MALES COLLECTED BY HOLLISTER MAY 1905 (USNM #196115-6). 2 DETECTED BY GRINNELL 17 FEB 1910. 1 MALE COLLECTED BY DIXON 18 FEB 1910 (MVZ #12733). 1 FEMALE COLLECTED BY KUSCHE 1 JAN 1922 (CAS #25320). 1 ACTIVE PAIR DETECTED 21 APR 1983.

PLSS:	T09N, R23E, Sec. 29, SE (S)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-11 N3857661 E719995	Latitude/Longitude:	34.83749 / -114.59413	Elevation (feet):	475

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:

GRI10U0018	GRINNELL, J. (MUSEUM OF VERTEBRATE ZOOLOGY) - FIELD NOTES FROM EXPEDITION 15 FEB-15 MAY 1910: "COLORADO RIVER, IN CALIFORNIA AND ARIZONA." 1910-05-15
HOL05S0002	HOLLISTER, N. - USNM #196115 & 196116 COLLECTED AT NEEDLES, SAN BERNARDINO COUNTY 1905-05-11
HUN83F0019	HUNTER, W.C. - FIELD SURVEY FORM FOR MELANERPES UROPYGIALIS 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
KUS22S0001	KUSCHE, J. - CAS #25320 COLLECTED FROM NEEDLES 1922-01-01
MVZ10S0003	MUSEUM OF VERTEBRATE ZOOLOGY (UNIVERSITY OF CALIFORNIA, BERKELEY) - MVZ 12733 COLLECTED BY JOSEPH DIXON (#514) AT "COLORADO RIVER, NEEDLES." 1910-02-18



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06611	EO Index:	25400
Key Quad:	Needles (3411475)	Element Code:	ABNYF04150
Occurrence Number:	27	Occurrence Last Updated:	2012-04-11

Scientific Name:	<i>Melanerpes uropygialis</i>	Common Name:	Gila woodpecker
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S1	Other Lists:	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.	CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed:	1987-04-13	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1987-04-13	Occurrence Rank:	Fair
Owner/Manager:	CITY OF NEEDLES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
NEEDLES SEWAGE DISPOSAL SITE, ALONG COLORADO RIVER SE OF NEEDLES.

Detailed Location:
1910: MVZ RECORD LOCATION GIVEN AS "COLORADO RIVER, NEEDLES, SAN BERNARDINO CA." LOCALITY OF USNM, CAS SPECIMENS IS "NEEDLES."

Ecological:
AREA POSSIBLY USED FOR BREEDING; 40 ACRES OF SCATTERED PATCHES OF WILLOW AND SALT CEDAR, WITH SOME MESQUITE (1987).

Threats:
POSSIBLY THREATENED BY ENLARGEMENT OR MANIPULATION OF DISPOSAL SITE.

General:
2 MALES COLLECTED BY HOLLISTER MAY 1905 (USNM #196115-6). 2 DETECTED BY GRINNELL 17 FEB 1910. 1 MALE COLLECTED BY DIXON 18 FEB 1910 (MVZ #12733). 1 FEMALE COLLECTED BY KUSCHE 1 JAN 1922 (CAS #25320). 2 DETECTED 13 APR 1987.

PLSS:	T09N, R23E, Sec. 33, NW (S)	Accuracy:	1/5 mile	Area (acres):	0
UTM:	Zone-11 N3856869 E720420	Latitude/Longitude:	34.83027 / -114.58969	Elevation (feet):	470

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:

GRI10U0018	GRINNELL, J. (MUSEUM OF VERTEBRATE ZOOLOGY) - FIELD NOTES FROM EXPEDITION 15 FEB-15 MAY 1910: "COLORADO RIVER, IN CALIFORNIA AND ARIZONA." 1910-05-15
HOL05S0002	HOLLISTER, N. - USNM #196115 & 196116 COLLECTED AT NEEDLES, SAN BERNARDINO COUNTY 1905-05-11
KUS22S0001	KUSCHE, J. - CAS #25320 COLLECTED FROM NEEDLES 1922-01-01
LAY87F0021	LAYMON, S. & M. HALTERMAN - FIELD SURVEY FORM FOR MELANERPES UROPYGIALIS AT NEEDLES SEWAGE DISPOSAL SITE, OBSERVED DURING ELF OWL ASSESSMENT PROJECT 1987-04-13
MVZ10S0003	MUSEUM OF VERTEBRATE ZOOLOGY (UNIVERSITY OF CALIFORNIA, BERKELEY) - MVZ 12733 COLLECTED BY JOSEPH DIXON (#514) AT "COLORADO RIVER, NEEDLES." 1910-02-18



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	85533	EO Index:	86551
Key Quad:	Needles (3411475)	Element Code:	ABNYF04150
Occurrence Number:	41	Occurrence Last Updated:	2012-05-16

Scientific Name:	<i>Melanerpes uropygialis</i>	Common Name:	Gila woodpecker
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S1	Other Lists:	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.	CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed:	2009-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2009-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	USFWS-HAVASU NWR	Trend:	Unknown
Presence:	Presumed Extant		

Location:
TOPOCK PLATFORM RESTORATION SITE, ALONG E SIDE OF COLORADO RIVER, ABOUT 2.25 MI NE PARKER JUNCTION, HAVASU NWR.

Detailed Location:
1977: GAINES BOAT SURVEY CR1 SITE, NEEDLES TO BEAL LAKE. 1986: W SIDE TOPOCK MARSH SURVEYED FROM NEEDLES TO BEAL SLOUGH. MAPPED TO 2009 YBCU SURVEY SITES "HAVTPR" AND SOUTHERN SECTION OF "HAVLR."

Ecological:
AREA INCLUDES 21.7 ACRES OF RESTORED NATIVE HABITAT; OVERSTORY FREMONT COTTONWOOD & GOODDING'S WILLOW, UNDERSTORY SCREWBEAN MESQUITE, WILLOW, & COTTONWOOD. NEXT TO SEASONALLY FLOODED FIELDS W/ REMNANT WILLOWS.

Threats:
General:
UP TO 3 DETECTED 1 AUG 1977. 6-14 BIRDS ESTIMATED 8-28 JUN DURING YBCU SURVEY. UNKNOWN #S DETECTED DURING THE 2009 YBCU SURVEY.

PLSS:	T99X, R99X, Sec. UN (X)	Accuracy:	non-specific area	Area (acres):	191
UTM:	Zone-11 N3852288 E723035	Latitude/Longitude:	34.78842 / -114.56233	Elevation (feet):	460

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
MCN10R0001	MCNEIL, S. ET AL. (SOUTHERN SIERRA RESEARCH STATION) - YELLOW-BILLED CUCKOO DISTRIBUTION, ABUNDANCE AND HABITAT USE ON THE LOWER COLORADO RIVER AND TRIBUTARIES, 2009 ANNUAL REPORT 2010-06-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06580	EO Index:	25270
Key Quad:	Needles SW (3411476)	Element Code:	ABPAE36010
Occurrence Number:	27	Occurrence Last Updated:	1989-08-10

Scientific Name:	<i>Pyrocephalus rubinus</i>	Common Name:	vermillion flycatcher
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S2S3	Other Lists:	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern

General Habitat:	Micro Habitat:
DURING NESTING, INHABITS DESERT RIPARIAN ADJACENT TO IRRIGATED FIELDS, IRRIGATION DITCHES, PASTURES, AND OTHER OPEN, MESIC AREAS.	NEST IN COTTONWOOD, WILLOW, MESQUITE, AND OTHER LARGE DESERT RIPARIAN TREES.

Last Date Observed:	1938-03-15	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1938-03-15	Occurrence Rank:	Unknown
Owner/Manager:	PVT, BLM	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ABOUT 2 MILES W OF NEEDLES, E OF SACRAMENTO MOUNTAINS.

Detailed Location:

Ecological:

Threats:

General:
LACM SPECIMEN #18939 COLLECTED IN 1938.

PLSS:	T09N, R22E, Sec. 25, SW (S)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-11 N3858232 E715457	Latitude/Longitude:	34.84361 / -114.64357	Elevation (feet):	680

County Summary:	Quad Summary:
San Bernardino	Needles SW (3411476)

Sources:
BLM80S0011 BLM - DESERT PLAN STAFF - COMPILATION OF HISTORIC MUSEUM SPECIMEN INFORMATION FOR PYROCEPHALUS RUBINUS, COLLECTED DURING THE PREPARATION OF "THE CALIFORNIA DESERT PLAN". 1980-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 06615 **EO Index:** 12434
Key Quad: Needles (3411475) **Element Code:** ABPAE43080
Occurrence Number: 9 **Occurrence Last Updated:** 1995-12-12

Scientific Name: *Myiarchus tyrannulus* **Common Name:** brown-crested flycatcher
Listing Status: **Federal:** None **Rare Plant Rank:**
State: None **Other Lists:** CDFW_WL-Watch List
CNDDB Element Ranks: **Global:** G5 IUCN_LC-Least Concern
State: S3

General Habitat: INHABITS DESERT RIPARIAN AREAS ALONG THE COLORADO RIVER, AS WELL AS OTHER DESERT OASES AND RIPARIAN AREAS NW TO VICTORVILLE.
Micro Habitat: REQUIRES RIPARIAN THICKETS, TREES, SNAGS, AND SHRUBS FOR FORAGING PERCHES, NESTING CAVITIES, AND COVER.

Last Date Observed: 1986-06-08 **Occurrence Type:** Natural/Native occurrence
Last Survey Date: 1986-06-08 **Occurrence Rank:** Unknown
Owner/Manager: USBOR, USFWS-HAVASU NWR **Trend:** Decreasing
Presence: Presumed Extant

Location: HAVASU NWR, MOJAVE VALLEY, AZ. JUST SE OF NEEDLES PRIMARILY ALONG E SIDE COLORADO RIVER.

Detailed Location:

Ecological:

Threats: AREA DEGRADED FROM FLOODING, SALINITY PROBLEMS, AND HEAVY SALT CEDAR INFESTATION.

General:

RECORDED BY GAINES DURING RIPARIAN SURVEY IN 1977; ONE MALE OBSERVED DURING SUMMER OF 1986.

PLSS: T16N, R22W, Sec. 01 (G) **Accuracy:** specific area **Area (acres):** 2,857
UTM: Zone-11 N3852933 E723245 **Latitude/Longitude:** 34.79419 / -114.55987 **Elevation (feet):** 465

County Summary:

San Bernardino, Arizona State

Quad Summary:

Needles (3411475)

Sources:

GAI77R0002 GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
LAY86F0001 LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 06605
Key Quad: Needles (3411475)
Occurrence Number: 11

EO Index: 25266
Element Code: ABPAE43080
Occurrence Last Updated: 1995-12-12

Scientific Name: *Myiarchus tyrannulus*
Common Name: brown-crested flycatcher

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G5
State: S3

Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_LC-Least Concern

General Habitat:
INHABITS DESERT RIPARIAN AREAS ALONG THE COLORADO RIVER, AS WELL AS OTHER DESERT OASES AND RIPARIAN AREAS NW TO VICTORVILLE.

Micro Habitat:
REQUIRES RIPARIAN THICKETS, TREES, SNAGS, AND SHRUBS FOR FORAGING PERCHES, NESTING CAVITIES, AND COVER.

Last Date Observed: 1983-06-10
Last Survey Date: 1983-06-10
Owner/Manager: PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
NEEDLES GOLF COURSE.

Detailed Location:

Ecological:
HABITAT CONSISTS OF GOODDING'S WILLOW AND SALT CEDAR; SURROUNDED BY DEVELOPMENT.

Threats:

General:
ONE INDIVIDUAL OBSERVED; PRESUMED NESTING.

PLSS: T09N, R23E, Sec. 29, SE (S) **Accuracy:** 1/5 mile **Area (acres):** 0
UTM: Zone-11 N3857661 E719995 **Latitude/Longitude:** 34.83749 / -114.59413 **Elevation (feet):** 475

County Summary: San Bernardino
Quad Summary: Needles (3411475)

Sources:
HUN83F0027 HUNTER, W.C. - FIELD SURVEY FORM FOR MYIARCHUS TYRANNULUS 1983-XX-XX
HUN83U0001 HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06615	EO Index:	14639
Key Quad:	Needles (3411475)	Element Code:	ABPBK06090
Occurrence Number:	33	Occurrence Last Updated:	1995-12-12

Scientific Name:	<i>Toxostoma crissale</i>	Common Name:	Crissal thrasher
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S3	Other Lists:	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern

General Habitat:	Micro Habitat:
RESIDENT OF SOUTHEASTERN DESERTS IN DESERT RIPARIAN AND DESERT WASH HABITATS.	NESTS IN DENSE VEGETATION ALONG STREAMS/WASHES; MESQUITE, SCREWBEAN MESQUITE, IRONWOOD, CATCLAW, ACACIA, ARROWWEED, WILLOW.

Last Date Observed:	1986-06-08	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1986-06-08	Occurrence Rank:	Unknown
Owner/Manager:	USBOR, USFWS-HAVASU NWR	Trend:	Decreasing
Presence:	Presumed Extant		

Location:
HAVASU NWR, MOJAVE VALLEY, AZ. JUST SE OF NEEDLES PRIMARILY ALONG E SIDE COLORADO RIVER.

Detailed Location:

Ecological:
AREA DEGRADED FROM FLOODING/SALINITY PROBLEMS AND HEAVY SALT CEDAR INFESTATION.

Threats:

General:
ONE OBS DURING SUMMER OF 1986. ALSO RECORDED BY GAINES DURING RIPARIAN SURVEY IN 1977.

PLSS:	T16N, R22W, Sec. 01 (G)	Accuracy:	specific area	Area (acres):	2,857
UTM:	Zone-11 N3852933 E723245	Latitude/Longitude:	34.79419 / -114.55987	Elevation (feet):	465

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	84626	EO Index:	12427
Key Quad:	Needles (3411475)	Element Code:	ABPBW01111
Occurrence Number:	2	Occurrence Last Updated:	2012-01-03

Scientific Name:	<i>Vireo bellii arizonae</i>	Common Name:	Arizona Bell's vireo
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T4 State: S1S2	Other Lists:	BLM_S-Sensitive IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT ALONG COLORADO RIVER. CHIEFLY INHABITS WILLOW THICKETS WITH UNDERGROWTH OF BACCHARIS GLUTINOSA.	NESTS IN WILLOW, MESQUITE, OR OTHER SMALL TREE/SHRUB, WITHIN 8 FT (USUALLY 2-3 FT) OF GROUND.

Last Date Observed:	1986-06-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1986-06-28	Occurrence Rank:	Unknown
Owner/Manager:	USBOR, USFWS-HAVASU NWR	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ALONG THE COLORADO RIVER AT THE NORTHERN BOUNDARY OF LAKE HAVASU NWR, ABOUT 1.6 MI SE OF HWY 40 AT E BROADWAY ST.

Detailed Location:
1981 DATA MAPPED TO LOCATIONS GIVEN BY DISTANCE FROM "HAVASU N.W.R. NORTHERN BOUNDARY."

Ecological:
HABITAT CONSISTED OF "SCATTERED PATCHES OF WILLOW SURROUNDED BY SALT-CEDAR" & "WILLOW-MESQUITE" MIX. IN 1986, HABITAT REPORTED TO BE GOOD, BUT FLOODING, SALINITY, AND HEAVY SALT CEDAR INFESTATION WERE PROBLEMS.

Threats:
General:
2 SINGING MALES DETECTED BTWN 10 APRIL & 18 JUN 1981. 7 SINGING MALES DETECTED 10 JUN 1983 BTWN T8 R23 SEC 4 & T8 R23 SEC 26 ALONG THE COLORADO RIVER. 11 SINGING MALES DETECTED BTWN 8 & 28 JUN 1986 BETWEEN JACK SMITH PARK & BEAL SLOUGH.

PLSS:	T08N, R23E, Sec. 09 (S)	Accuracy:	non-specific area	Area (acres):	326
UTM:	Zone-11 N3854323 E721572	Latitude/Longitude:	34.80707 / -114.57777	Elevation (feet):	480

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

HUN83F0049	HUNTER, W.C. - FIELD SURVEY FORM FOR VIREO BELLII ARIZONAE 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
SER86R0001	SERENA, M. - DISTRIBUTION HABITAT PREFERENCES, AND REPRODUCTIVE SUCCESS OF ARIZONA BELL'S VIREO (VIREO BELLII ARIZONAE) ALONG THE LOWER COLORADO RIVER IN 1981. 1986-11-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	84625	EO Index:	24920
Key Quad:	Needles (3411475)	Element Code:	ABPBW01111
Occurrence Number:	15	Occurrence Last Updated:	2012-01-03

Scientific Name:	<i>Vireo bellii arizonae</i>	Common Name:	Arizona Bell's vireo
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T4 State: S1S2	Other Lists:	BLM_S-Sensitive IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT ALONG COLORADO RIVER. CHIEFLY INHABITS WILLOW THICKETS WITH UNDERGROWTH OF BACCHARIS GLUTINOSA.	NESTS IN WILLOW, MESQUITE, OR OTHER SMALL TREE/SHRUB, WITHIN 8 FT (USUALLY 2-3 FT) OF GROUND.

Last Date Observed:	1987-05-01	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1987-05-01	Occurrence Rank:	Good
Owner/Manager:	CITY OF NEEDLES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
IN VICINITY OF JACK SMITH PARK IN NEEDLES, ABOUT 1 MI NE OF HWY 40 AT E BROADWAY ST, FORT MOHAVE INDIAN RESERVATION.

Detailed Location:
1981 DATA MAPPED TO LOCATIONS GIVEN BY DISTANCE FROM A "U.S.G.S. WATER FLOW MONITORING STATION," BELIEVED TO BE REFERRING TO USSGS STATION 09423550. 1987 DATA MAPPED TO "T-9N, R-23E, W 1/2 SEC 33."

Ecological:
IN THE VICINITY OF SEWAGE DISPOSAL PONDS.

Threats:
POSSIBLE THREATS INCLUDE ENLARGEMENT OR MANIPULATION OF DISPOSAL SITE.

General:
5 SINGING MALES DETECTED BETWEEN 10 APRIL & 18 JUN 1981. 11 SINGING MALES DETECTED BETWEEN 8 & 28 JUN 1986 BETWEEN JACK SMITH PARK & BEAL SLOUGH (ALSO EOS #23 & 24). 3 SINGING MALES DETECTED ON 1 MAY 1987.

PLSS:	T09N, R23E, Sec. 33 (S)	Accuracy:	non-specific area	Area (acres):	543
UTM:	Zone-11 N3856885 E720510	Latitude/Longitude:	34.83038 / -114.58870	Elevation (feet):	470

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
LAY87F0022	LAYMON, S. & M. HALTERMAN - FIELD SURVEY FORM FOR VIREO BELLII ARIZONAE AT NEEDLES SEWAGE DISPOSAL AREA, OBSERVATION DURING ELF OWL ASSESSMENT PROJECT, OCC. #015. 1987-05-01
SER86R0001	SERENA, M. - DISTRIBUTION HABITAT PREFERENCES, AND REPRODUCTIVE SUCCESS OF ARIZONA BELL'S VIREO (VIREO BELLII ARIZONAE) ALONG THE LOWER COLORADO RIVER IN 1981. 1986-11-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	84606	EO Index:	85588
Key Quad:	Needles NW (3411486)	Element Code:	ABPBW01111
Occurrence Number:	21	Occurrence Last Updated:	2012-01-03

Scientific Name:	<i>Vireo bellii arizonae</i>	Common Name:	Arizona Bell's vireo
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T4 State: S1S2	Other Lists:	BLM_S-Sensitive IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT ALONG COLORADO RIVER. CHIEFLY INHABITS WILLOW THICKETS WITH UNDERGROWTH OF BACCHARIS GLUTINOSA.	NESTS IN WILLOW, MESQUITE, OR OTHER SMALL TREE/SHRUB, WITHIN 8 FT (USUALLY 2-3 FT) OF GROUND.

Last Date Observed:	1981-06-18	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1981-06-18	Occurrence Rank:	Unknown
Owner/Manager:	BIA-FORT MOJAVE RES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
ALONG THE COLORADO RIVER BETWEEN GORDON DRIVE & LAGUNA RD (BOTH AT MOHAVE VALLEY DR), ABOUT 5.5 MI NNW OF NEEDLES.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED TO DESCRIBED LOCATIONS INCLUDING "2.6 KM S OF RUSSELL BROS MAIN IRRIGATION PUMP," "0.8 KM N OF THE FIRST ROAD SOUTH OF THE NORTH NEEDLES COMPRESSOR STATION," & "1.9 KM N OF WETMORE TRAILER PARK BOAT RAMP."

Ecological:
Threats:

General:
5 SINGING MALES DETECTED BETWEEN 10 APRIL TO 18 JUN 1981.

PLSS:	T10N, R22E, Sec. 36 (S)	Accuracy:	non-specific area	Area (acres):	1,146
UTM:	Zone-11 N3866301 E716086	Latitude/Longitude:	34.91617 / -114.63461	Elevation (feet):	540

County Summary:	Quad Summary:
San Bernardino	Needles NW (3411486)

Sources:
SER86R0001 SERENA, M. - DISTRIBUTION HABITAT PREFERENCES, AND REPRODUCTIVE SUCCESS OF ARIZONA BELL'S VIREO (VIREO BELLII ARIZONAE) ALONG THE LOWER COLORADO RIVER IN 1981. 1986-11-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	84608	EO Index:	85589
Key Quad:	Needles NW (3411486)	Element Code:	ABPBW01111
Occurrence Number:	22	Occurrence Last Updated:	2012-01-03

Scientific Name:	<i>Vireo bellii arizonae</i>	Common Name:	Arizona Bell's vireo
Listing Status:	Federal: None State: Endangered	Rare Plant Rank:	
CNDDDB Element Ranks:	Global: G5T4 State: S1S2	Other Lists:	BLM_S-Sensitive IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT ALONG COLORADO RIVER. CHIEFLY INHABITS WILLOW THICKETS WITH UNDERGROWTH OF BACCHARIS GLUTINOSA.	NESTS IN WILLOW, MESQUITE, OR OTHER SMALL TREE/SHRUB, WITHIN 8 FT (USUALLY 2-3 FT) OF GROUND.

Last Date Observed:	1981-06-18	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1981-06-18	Occurrence Rank:	Unknown
Owner/Manager:	BIA-FORT MOJAVE RES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
JUST S OF WILSON DR ALONG PEBBLE BEACH CIRCLE, ABOUT 3.7 MI NW OF NEEDLES, FORT MOHAVE INDIAN RESERVATION.

Detailed Location:
MAPPED TO LOCATION STATED AS "0.1 KM S OF WETMORE TRAILER PARK BOAT RAMP" & "0.05 KM S" OF THAT LOCATION.

Ecological:

Threats:

General:
2 SINGING MALES DETECTED BETWEEN 10 APRIL TO 18 JUN 1981.

PLSS:	T09N, R22E, Sec. 12 (S)	Accuracy:	2/5 mile	Area (acres):	0
UTM:	Zone-11 N3862358 E715877	Latitude/Longitude:	34.88069 / -114.63792	Elevation (feet):	480

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles NW (3411486)

Sources:
SER86R0001 SERENA, M. - DISTRIBUTION HABITAT PREFERENCES, AND REPRODUCTIVE SUCCESS OF ARIZONA BELL'S VIREO (VIREO BELLII ARIZONAE) ALONG THE LOWER COLORADO RIVER IN 1981. 1986-11-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 84610	EO Index: 85601
Key Quad: Needles (3411475)	Element Code: ABPBW01111
Occurrence Number: 23	Occurrence Last Updated: 2012-06-15

Scientific Name: <i>Vireo bellii arizonae</i>	Common Name: Arizona Bell's vireo
Listing Status: Federal: None State: Endangered	Rare Plant Rank:
CNDDB Element Ranks: Global: G5T4 State: S1S2	Other Lists: BLM_S-Sensitive IUCN_NT-Near Threatened USFWS_BCC-Birds of Conservation Concern

General Habitat: SUMMER RESIDENT ALONG COLORADO RIVER. CHIEFLY INHABITS WILLOW THICKETS WITH UNDERGROWTH OF BACCHARIS GLUTINOSA.	Micro Habitat: NESTS IN WILLOW, MESQUITE, OR OTHER SMALL TREE/SHRUB, WITHIN 8 FT (USUALLY 2-3 FT) OF GROUND.
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Last Date Observed: 1986-06-28	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1986-06-28	Occurrence Rank: Unknown
Owner/Manager: USBOR, USFWS-HAVASU NWR	Trend: Unknown
Presence: Presumed Extant	

Location:
ALONG THE COLORADO RIVER, ABOUT 1.6 MI NE OF HWY 40 AT 5 MILE RD, LAKE HAVASU NATIONAL WILDLIFE REFUGE.

Detailed Location:
1981 DATA MAPPED TO LOCATIONS STATED AS "ABOUT 4.8 KM N" & "ABOUT 4.0 KM N" OF "BEAL SLOUGH."

Ecological:
HABITAT CONSISTED OF "SCATTERED PATCHES OF WILLOW SURROUNDED BY SALT-CEDAR" & "WILLOW-MESQUITE" MIX.

Threats:
General:

2 SINGING MALES BTWN 10 APRIL & 18 JUN 1981. 7 SINGING MALES 10 JUN 1983 BTWN T8 R23 SEC 4 & T8 R23 SEC 26 ALONG THE COLORADO RIVER. 11 SINGING MALES BTWN 8 & 28 JUN 1986 BETWEEN JACK SMITH PARK & BEAL SLOUGH (ALSO EOS #15 & 24).

PLSS: T08N, R23E, Sec. 15 (S)	Accuracy: specific area	Area (acres): 555
UTM: Zone-11 N3852059 E722378	Latitude/Longitude: 34.78650 / -114.56957	Elevation (feet): 480

County Summary: San Bernardino, Arizona State	Quad Summary: Needles (3411475)
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Sources:

HUN83F0049	HUNTER, W.C. - FIELD SURVEY FORM FOR VIREO BELLII ARIZONAE 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX
SER86R0001	SERENA, M. - DISTRIBUTION HABITAT PREFERENCES, AND REPRODUCTIVE SUCCESS OF ARIZONA BELL'S VIREO (VIREO BELLII ARIZONAE) ALONG THE LOWER COLORADO RIVER IN 1981. 1986-11-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06615	EO Index:	14663
Key Quad:	Needles (3411475)	Element Code:	ABPBX03017
Occurrence Number:	5	Occurrence Last Updated:	1995-12-12

Scientific Name:	<i>Setophaga petechia sonorana</i>	Common Name:	Sonoran yellow warbler
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T2T3 State: S2	Other Lists:	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT OF COLORADO RIVER VALLEY, IN RIPARIAN DECIDUOUS HABITAT. BELOW 600 FT ELEVATION.	INHABITS COTTONWOODS AND WILLOWS, PARTICULARLY THE CROWN FOLIAGE; NESTS IN UNDERSTORY, USUALLY 2-16 FT ABOVE GROUND.

Last Date Observed:	1986-06-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1986-06-28	Occurrence Rank:	Unknown
Owner/Manager:	USBOR, USFWS-HAVASU NWR	Trend:	Decreasing
Presence:	Presumed Extant		

Location:
HAVASU NWR; MOJAVE VALLEY, AZ. JUST SE OF NEEDLES PRIMARILY ALONG E SIDE COLORADO RIVER.

Detailed Location:
4 MALES OBS IN JUNE, 1986. ONE PAIR ALSO OBS ON CALIFORNIA SIDE OF RIVER NEAR NEEDLES SEWAGE PONDS.

Ecological:
AREA IS VERY DEGRADED FROM FLOODING, SALINITY & HEAVY SALT CEDAR INFESTATION.

Threats:
General:

PLSS:	T16N, R22W, Sec. 01 (G)	Accuracy:	specific area	Area (acres):	2,857
UTM:	Zone-11 N3852933 E723245	Latitude/Longitude:	34.79419 / -114.55987	Elevation (feet):	470

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

HUN83F0056	HUNTER, W.C. - FIELD SURVEY FORM FOR DENDROICA PETECHIA SONORANA 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 06615	EO Index: 14671
Key Quad: Needles (3411475)	Element Code: ABPBX24010
Occurrence Number: 27	Occurrence Last Updated: 1996-01-08

Scientific Name: <i>Icteria virens</i>	Common Name: yellow-breasted chat
Listing Status: Federal: None State: None	Rare Plant Rank:
CNDDB Element Ranks: Global: G5 State: S3	Other Lists: CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern

General Habitat: SUMMER RESIDENT; INHABITS RIPARIAN THICKETS OF WILLOW AND OTHER BRUSHY TANGLES NEAR WATERCOURSES.	Micro Habitat: NESTS IN LOW, DENSE RIPARIAN, CONSISTING OF WILLOW, BLACKBERRY, WILD GRAPE; FORAGES AND NESTS WITHIN 10 FT OF GROUND.
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Last Date Observed: 1986-06-28	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1986-06-28	Occurrence Rank: Unknown
Owner/Manager: USBOR, USFWS-HAVASU NWR	Trend: Increasing
Presence: Presumed Extant	

Location:
HAVASU NWR, MOJAVE VALLEY, AZ. JUST SE OF NEEDLES ALONG BOTH SIDES COLORADO RIVER.

Detailed Location:
42 MALES OBS ON AZ SIDE DURING 1986 SURVEY. 16 MALES OBS ON CA SIDE IN 1983.

Ecological:
THERE IS EVIDENCE THIS TAXON HAS MOVED INTO SALT CEDAR HABITAT OVER THE PAST 10 OR SO YEARS, THUS THE AMOUNT OF HABITAT AVAILABLE TO IT ALONG THE COLO RIV HAS INCREASED DESPITE THE LOSS OF SO MUCH NATIVE RIPARIAN VEG.

Threats:
General:
42 MALES OBS ON AZ SIDE DURING 1986 SURVEY. 16 MALES OBS ON CA SIDE IN 1983.

PLSS: T16N, R22W, Sec. 01 (G)	Accuracy: specific area	Area (acres): 2,857
UTM: Zone-11 N3852933 E723245	Latitude/Longitude: 34.79419 / -114.55987	Elevation (feet): 465

County Summary: San Bernardino, Arizona State	Quad Summary: Needles (3411475)
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Sources:

GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
HUN83F0028	HUNTER, W.C. - FIELD SURVEY FORM FOR ICTERIA VIRENS 1983-XX-XX
HUN83U0001	HUNTER, W. - VEGETATION MAPS PREPARED FOR BUREAU OF RECLAMATION AS PART OF A BIRD SURVEY FOR CALIFORNIA DEPARTMENT OF FISH AND GAME 1983-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06611	EO Index:	24860
Key Quad:	Needles (3411475)	Element Code:	ABPBX24010
Occurrence Number:	67	Occurrence Last Updated:	1989-08-10

Scientific Name:	<i>Icteria virens</i>	Common Name:	yellow-breasted chat
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S3	Other Lists:	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT; INHABITS RIPARIAN THICKETS OF WILLOW AND OTHER BRUSHY TANGLES NEAR WATERCOURSES.	NESTS IN LOW, DENSE RIPARIAN, CONSISTING OF WILLOW, BLACKBERRY, WILD GRAPE; FORAGES AND NESTS WITHIN 10 FT OF GROUND.

Last Date Observed:	1987-05-11	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1987-05-11	Occurrence Rank:	Fair
Owner/Manager:	CITY OF NEEDLES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
NEEDLES SEWAGE DISPOSAL SITE, ALONG COLORADO RIVER, SE OF NEEDLES.

Detailed Location:
5 INDIVIDUALS LOCATED DURING A 1987 SURVEY.

Ecological:
EXCELLENT HABITAT PROBABLY USED FOR BREEDING. 40 ACRES OF SCATTERED PATCHES OF WILLOW, SALT CEDAR WITH SOME MESQUITE.

Threats:
POSSIBLY THREATENED BY ENLARGEMENT OR MANIPULATION OF DISPOSAL SITE.

General:			
PLSS:	T09N, R23E, Sec. 33, W (S)	Accuracy:	1/5 mile
UTM:	Zone-11 N3856869 E720420	Latitude/Longitude:	34.83027 / -114.58969
		Area (acres):	0
		Elevation (feet):	470

County Summary:	Quad Summary:
San Bernardino	Needles (3411475)

Sources:
LAY87F0020 LAYMON, S. & M. HALTERMAN - FIELD SURVEY FORM FOR ICTERIA VIRENS AT NEEDLES SEWAGE DISPOSAL SITE, OBS DURING ELF OWL ASSESSMENT PROJECT, OCC. #027. 1987-05-01



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	06615	EO Index:	13338
Key Quad:	Needles (3411475)	Element Code:	ABPBX45030
Occurrence Number:	12	Occurrence Last Updated:	1996-01-08

Scientific Name:	<i>Piranga rubra</i>	Common Name:	summer tanager
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5 State: S1	Other Lists:	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern

General Habitat:	Micro Habitat:
SUMMER RESIDENT OF DESERT RIPARIAN ALONG LOWER COLORADO RIVER, AND LOCALLY ELSEWHERE IN CALIFORNIA DESERTS.	REQUIRES COTTONWOOD-WILLOW RIPARIAN FOR NESTING AND FORAGING; PREFERS OLDER, DENSE STANDS ALONG STREAMS.

Last Date Observed:	1986-06-28	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1986-06-28	Occurrence Rank:	Unknown
Owner/Manager:	USBOR, USFWS-HAVASU NWR	Trend:	Decreasing
Presence:	Presumed Extant		

Location:
HAVASU NWR, MOJAVE VALLEY, AZ. JUST SE OF NEEDLES PRIMARILY ALONG E SIDE COLORADO RIVER.

Detailed Location:
5 MALES OBS DURING SUMMER 1986. ALSO OBS DURING 1977 SURVEY.

Ecological:
AREA CURRENTLY DEGRADED FROM PROBLEMS WITH FLOODING, SALINITY, AND SALT CEDAR INFESTATION. ONLY SCATTERED WILLOW AND COTTONWOOD TREES.

Threats:
General:
5 MALES OBS DURING SUMMER 1986. ALSO OBS DURING 1977 SURVEY.

PLSS:	T16N, R22W, Sec. 01 (G)	Accuracy:	specific area	Area (acres):	2,857
UTM:	Zone-11 N3852933 E723245	Latitude/Longitude:	34.79419 / -114.55987	Elevation (feet):	465

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475)

Sources:

GAI77R0002	GAINES, D. - THE STATUS OF SELECTED RIPARIAN FOREST BIRDS IN CALIFORNIA - A PRELIMINARY SURVEY AND REVIEW. UNPUBLISHED REPORT TO NONGAME WILDLIFE INVESTIGATIONS, CALIFORNIA DEPT OF FISH & GAME. 1977-XX-XX
LAY86F0001	LAYMON, S. & M. HALTERMAN - COLLECTION OF FIELD SURVEY FORMS AND MAPS FROM A TRIP TO THE COLORADO RIVER AND DESERTS 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	39107	EO Index:	42469
Key Quad:	Needles (3411475)	Element Code:	AFCJC02110
Occurrence Number:	1	Occurrence Last Updated:	2000-02-29

Scientific Name:	<i>Catostomus latipinnis</i>	Common Name:	flannelmouth sucker
Listing Status:	Federal: None State: None	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G3G4 State: S1	Other Lists:	

General Habitat:	Micro Habitat:
COLORADO RIVER BORDERING CALIFORNIA.	SPAWNS IN RIFFLES, USUALLY OVER A SUBSTRATE OF COARSE GRAVEL.

Last Date Observed:	2000-01-25	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2000-01-25	Occurrence Rank:	Fair
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
COLORADO RIVER, NEAR NEEDLES PARK MARINA, NEEDLES.

Detailed Location:
COORDINATES GIVEN AS LATITUDE 34, 50', 78" N; LONGITUDE 114, 35', 98" W.

Ecological:
RIVERINE. USGS REPORT ON FISH FOUND BETWEEN LAKE HAVASU AND UPSTREAM TO DAVIS DAM, NEEDLES AREA SAMPLED AND DATA FOR THE REACH IN REPORT.

Threats:

General:
FISH WAS ORIGINALLY CAPTURED 10/26/1999 AT BIG BEND PARK (NEAR LAUGHLIN NV); WEIGHT 1978 GRAMS; LENGTH 535 MM; PIT TAG #2027431D59; INPLANTED WITH RADIO TELEMETRY TAG AND RELEASED. LOCATED AT ABOVE COORD. 1/25/2000.

PLSS:	T09N, R23E, Sec. 29, SE (S)	Accuracy:	non-specific area	Area (acres):	259
UTM:	Zone-11 N3859260 E718572	Latitude/Longitude:	34.85221 / -114.60926	Elevation (feet):	470

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475), Needles SW (3411476), Needles NW (3411486)

Sources:

CRU00F0001	CRUM, L. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR CATOSTOMUS LATIPINNIS (FLANNELMOUTH SUCKER) 2000-01-25
USG00R0001	U.S. GEOLOGICAL SURVEY - SEASON REPORT: COLORADO RIVER "ROUND UP" - FISH SURVEY FORM DAVIS DAM TO LAKE HAVASU, NOVEMBER, 1999 TO APRIL, 2000. 2000-04-10



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	39107	EO Index:	34114
Key Quad:	Needles (3411475)	Element Code:	AFCJC11010
Occurrence Number:	25	Occurrence Last Updated:	2000-09-12

Scientific Name:	<i>Xyrauchen texanus</i>	Common Name:	razorback sucker
Listing Status:	Federal: Endangered State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G1 State: S1S2	Other Lists:	AFS_EN-Endangered CDFW_FP-Fully Protected IUCN_EN-Endangered

General Habitat:	Micro Habitat:
FOUND IN THE COLORADO RIVER BORDERING CALIFORNIA.	ADAPTED FOR SWIMMING IN SWIFT CURRENTS BUT ALSO NEED QUIET WATERS. SPAWN IN AREAS OF SAND/GRAVEL/ROCKS IN SHALLOW WATER.

Last Date Observed:	2000-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2000-XX-XX	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
COLORADO RIVER, RAINBOW BEACH TO SEWAGE DISPOSAL PONDS AREA, NEEDLES.

Detailed Location:
1 CAUGHT IN NEEDLES IN JUNE 1976, AND 1 CAUGHT AT RAINBOW BEACH 15 FEB 1976, MAPPED TO COVER BOTH THESE LOCATIONS. OBSERVED SPAWNING IN NEEDLES AREA IN 1952.

Ecological:
RIVERINE. USGS REPORT ON FISH FOUND BETWEEN LAKE HAVASU AND UPSTREAM TO DAVIS DAM, NEEDLES AREA SAMPLED AND DATA FOR THE REACH IN REPORT.

Threats:
General:

RAINBOW BEACH FISH, MALE, CAUGHT ANGLING, GUTTED WEIGHT 3600 GRAMS, AGE ~22 YEARS, FORK LENGTH 600 MM; NEEDLES FISH FL 673 MM, 22 YEARS OLD.

PLSS:	T09N, R23E, Sec. 29 (S)	Accuracy:	non-specific area	Area (acres):	259
UTM:	Zone-11 N3859260 E718572	Latitude/Longitude:	34.85221 / -114.60926	Elevation (feet):	467

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475), Needles SW (3411476), Needles NW (3411486)

Sources:

ULM85U0001	ULMER, L. - RECENT RECORDS OF RAZORBACK SUCKERS (XYRAUCHEN TEXANUS) FROM THE COLORADO RIVER, CALIFORNIA. 1985-XX-XX
USG00R0001	U.S. GEOLOGICAL SURVEY - SEASON REPORT: COLORADO RIVER "ROUND UP" - FISH SURVEY FORM DAVIS DAM TO LAKE HAVASU, NOVEMBER, 1999 TO APRIL, 2000. 2000-04-10



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 66572 **EO Index:** 66708
Key Quad: Needles (3411475) **Element Code:** AMACC10010
Occurrence Number: 242 **Occurrence Last Updated:** 2006-10-03

Scientific Name: *Antrozous pallidus* **Common Name:** pallid bat
Listing Status: **Federal:** None **Rare Plant Rank:**
State: None **Other Lists:** BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive
WBWG_H-High Priority
CNDDB Element Ranks: **Global:** G4
State: S3

General Habitat: DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS AND FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.
Micro Habitat: ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Last Date Observed: 1939-07-22 **Occurrence Type:** Natural/Native occurrence
Last Survey Date: 1939-07-22 **Occurrence Rank:** Unknown
Owner/Manager: UNKNOWN **Trend:** Unknown
Presence: Presumed Extant

Location:

NEEDLES.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED IN THE VICINITY OF NEEDLES.

Ecological:

Threats:

General:

1 UNKNOWN SPECIMEN COLLECTED BY CHARLES R. SHAW ON 22 JUL 1939, LSU #1426.

PLSS: T09N, R23E, Sec. 30 (S) **Accuracy:** 1 mile **Area (acres):** 0
UTM: Zone-11 N3858254 E718466 **Latitude/Longitude:** 34.84316 / -114.61067 **Elevation (feet):** 500

County Summary:

San Bernardino, Arizona State

Quad Summary:

Needles (3411475), Needles SW (3411476)

Sources:

MAN04S0028 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF ANTROZOUS PALLIDUS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM MVZ, CAS, KU, UWBM, UMNH, LACM, MSB, FMNH, TTU, MSU. 2004-12-09



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	58710	EO Index:	58746
Key Quad:	Needles NW (3411486)	Element Code:	AMAJF10011
Occurrence Number:	2	Occurrence Last Updated:	2004-12-17

Scientific Name:	<i>Lontra canadensis sonora</i>	Common Name:	southwestern river otter
Listing Status:	Federal: None	Rare Plant Rank:	
	State: None	Other Lists:	CDFW_SSC-Species of Special Concern
CNDDDB Element Ranks:	Global: G5T1		
	State: S1		

General Habitat:	Micro Habitat:
AQUATIC HABITATS ALONG THE COLORADO RIVER.	NEEDS ABUNDANT FOOD SOURCES AND SUFFICIENT WATER FOR SHELTER AND FORAGING.

Last Date Observed:	1926-12-31	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1926-12-31	Occurrence Rank:	Unknown
Owner/Manager:	BIA-FORT MOJAVE RES	Trend:	Unknown
Presence:	Presumed Extant		

Location:
FORT MOJAVE RESERVATION. COLORADO RIVER, ABOUT 5 MILES NORTH OF NEEDLES.

Detailed Location:

Ecological:

Threats:

General:

1 FEMALE SPECIMEN COLLECTED 31 DEC 1926 BY R. ELLIS JR. AT "NEEDLES, 5 MI N OF; COLORADO RIVER." DEPOSITED AT KU #48059.

PLSS:	T10N, R22E, Sec. 36 (S)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-11 N3865710 E716368	Latitude/Longitude:	34.91079 / -114.63168	Elevation (feet):	500

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles NE (3411485), Needles NW (3411486)

Sources:

MAN04S0009 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF LONTRA CANADENSIS SONORA SPECIMEN RECORDS FROM MANIS. THIS INCLUDES RECORDS FROM KU & MVZ. 2004-12-15



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 06553
Key Quad: Needles SW (3411476)
Occurrence Number: 42

EO Index: 14490
Element Code: AMALE04013
Occurrence Last Updated: 1989-08-10

Scientific Name: *Ovis canadensis nelsoni*

Common Name: desert bighorn sheep

Listing Status:
Federal: None
State: None
CNDDB Element Ranks:
Global: G4T4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_FP-Fully Protected
USFS_S-Sensitive

General Habitat:

WIDELY DISTRIBUTED FROM THE WHITE MTNS IN MONO CO. TO THE CHOCOLATE MTS IN IMPERIAL CO.

Micro Habitat:

OPEN, ROCKY, STEEP AREAS WITH AVAILABLE WATER AND HERBACEOUS FORAGE.

Last Date Observed: 1986-XX-XX
Last Survey Date: 1986-XX-XX
Owner/Manager: BLM, PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Decreasing

Location:
SACRAMENTO MOUNTAINS.

Detailed Location:

Ecological:

Threats:

DISEASE IS A PROBLEM. WATER IS A LIMITING FACTOR, BOTH IN DISTRIBUTION AND AMOUNT.

General:

POPULATION ESTIMATE OF 60 INDIVIDUALS; POPULATION DECLINING DUE TO DISEASE.

PLSS: T08N, R21E, Sec. 11 (S)

Accuracy: specific area

Area (acres): 27,834

UTM: Zone-11 N3853030 E705057

Latitude/Longitude: 34.79888 / -114.75851

Elevation (feet):

County Summary:

Quad Summary:

San Bernardino

Monumental Pass (3411466), Needles SW (3411476), Flattop Mtn. (3411477)

Sources:

WEA71R0004 WEAVER, R.A. & J. HALL - DESERT BIGHORN SHEEP IN SOUTHWESTERN SAN BERNARDINO COUNTY. WILDLIFE MANAGEMENT ADMINISTRATION REPORT NO. 71-8. 28PP. 1971-10-XX

WEA86U0001 WEAVER, R. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - ESTIMATED BIGHORN POPULATIONS BY MOUNTAIN RANGES. PERSONALLY UPDATED BY WEAVER IN 1986. 1986-06-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: A5665 **EO Index:** 107404
Key Quad: Needles SW (3411476) **Element Code:** ARAAF01012
Occurrence Number: 982 **Occurrence Last Updated:** 2017-08-02

Scientific Name: *Gopherus agassizii* **Common Name:** desert tortoise
Listing Status: **Federal:** Threatened **Rare Plant Rank:**
State: Threatened **Other Lists:** IUCN_VU-Vulnerable
CNDDB Element Ranks: **Global:** G3
State: S2S3

General Habitat:

MOST COMMON IN DESERT SCRUB, DESERT WASH, AND JOSHUA TREE HABITATS; OCCURS IN ALMOST EVERY DESERT HABITAT.

Micro Habitat:

REQUIRE FRIABLE SOIL FOR BURROW AND NEST CONSTRUCTION. CREOSOTE BUSH HABITAT WITH LARGE ANNUAL WILDFLOWER BLOOMS PREFERRED.

Last Date Observed: 2016-11-17 **Occurrence Type:** Natural/Native occurrence
Last Survey Date: 2016-11-17 **Occurrence Rank:** Good
Owner/Manager: SBD COUNTY **Trend:** Unknown
Presence: Presumed Extant

Location:

ABOUT 0.5 MILES W OF I-40 AT RIVER RD AND 1.25 MILES NW OF ERIN DR AT CORONADO ST, NEEDLES.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

BURROW IN SIDE OF SLOPE IN DESERT CREOSOTE SCRUB. LEVEES AND BASIN USED FOR STORMWATER CONTROL.

Threats:

CLOSE TO URBAN AREAS.

General:

1 ADULT OBSERVED HIBERNATING AT BACK OF BURROW ON 17 NOV 2016.

PLSS: T09N, R22E, Sec. 24, SW (S) **Accuracy:** 80 meters **Area (acres):** 5
UTM: Zone-11 N3859383 E716186 **Latitude/Longitude:** 34.85382 / -114.63531 **Elevation (feet):** 562

County Summary:

San Bernardino

Quad Summary:

Needles SW (3411476)

Sources:

STR16F0004 STRATTON, G. - FIELD SURVEY FORM FOR GOPHERUS AGASSIZII [SC-013417]. 2016-11-17



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	66572	EO Index:	82812
Key Quad:	Needles (3411475)	Element Code:	PDLOA031T0
Occurrence Number:	5	Occurrence Last Updated:	2011-02-23

Scientific Name:	<i>Mentzelia tricuspidis</i>	Common Name:	spiny-hair blazing star
Listing Status:	Federal: None State: None	Rare Plant Rank:	2B.1
CNDDDB Element Ranks:	Global: G4 State: S2	Other Lists:	

General Habitat:	Micro Habitat:
MOJAVEAN DESERT SCRUB.	SANDY OR GRAVELLY SLOPES AND WASHES.150-1280 M.

Last Date Observed:	1949-04-17	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1949-04-17	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
NEEDLES.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS CENTERED ON THE TOWN OF NEEDLES.

Ecological:
DRY DESERT WASH AND ROCKY HILLSIDE.

Threats:
General:

ONLY SOURCES ARE VAGUE HISTORICAL COLLECTIONS. NEEDS FIELDWORK. JONES 1884 COLLECTION "THE NEEDLES" AND 1942 HOLT COLLECTION "NEAR NEEDLES" ATTRIBUTED TO THIS OCCURRENCE.

PLSS:	T09N, R23E, Sec. 30 (S)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-11 N3858254 E718466	Latitude/Longitude:	34.84316 / -114.61067	Elevation (feet):	500

County Summary:	Quad Summary:
San Bernardino, Arizona State	Needles (3411475), Needles SW (3411476)

Sources:

COO49S0011	COOPER, N. - COOPER #3496 RSA #446910 1949-04-17
HOL42S0006	HOLT, V. - HOLT SN CHSC #1023 1942-03-26
JON84S0003	JONES, M. - JONES #3824 POM #83995, UC #380551 1884-05-05
MUN20S0028	MUNZ, P. & R. HARWOOD - MUNZ #3639 RSA #7615 1920-04-01



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

Phone: (760) 431-9440 Fax: (760) 431-5901

<http://www.fws.gov/carlsbad/>



In Reply Refer To:

December 05, 2021

Consultation Code: 08ECAR00-2022-SLI-0211

Event Code: 08ECAR00-2022-E-00583

Project Name: Riverlux Resort

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2022-SLI-0211

Event Code: Some(08ECAR00-2022-E-00583)

Project Name: Riverlux Resort

Project Type: DEVELOPMENT

Project Description: Riverlux Resort

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.84831964999999,-114.60914708903894,14z>



Counties: San Bernardino County, California

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yuma Ridgways (clapper) Rail <i>Rallus obsoletus [=longirostris] yumanensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3505	Endangered

Fishes

NAME	STATUS
Razorback Sucker <i>Xyrauchen texanus</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/530	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix B: Representative Site Photos









APPENDIX E

Focused Plant Survey

Riverlux Resort

FOCUSED PLANT SURVEY

May 2021

Prepared for:

Riverlux Resort
29991 Canyon Hills Road Suite 1709 PMB-300
Lake Elsinore, CA 92532

Prepared by:

Jeff Johnson
Pacific BioScience, Inc.
156 Woodburne
Newport Beach, California 92660



Pacific BioScience, Inc.

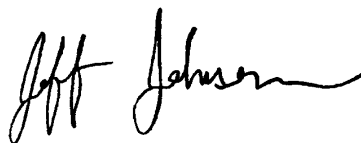
Focused Plant Survey

for

Riverlux Resort

May 2021

Prepared By: _____



Date: 5/23/21

Jeff Johnson
Principal Biologist
(805) 750-3474
Pacific BioScience, Inc.



156 Woodburne
Newport Beach, CA 92660
www.pacificbioscience.com

Table of Contents

1.0	Introduction	5
2.0	Project Location.....	5
3.0	Background	8
4.0	Methods.....	8
5.0	Results and Recommendations.....	9
6.0	References	13

List of Figures

Figure 1: Project Location 6
Figure 2: Project Limits 7
Figure 3: Plant Communities 10

List of Tables

Table 1: Special Status Plant Species Potentially Occurring within the Project Region
..... 12

List of Appendices

Appendix A: Representative Site Photographs 13

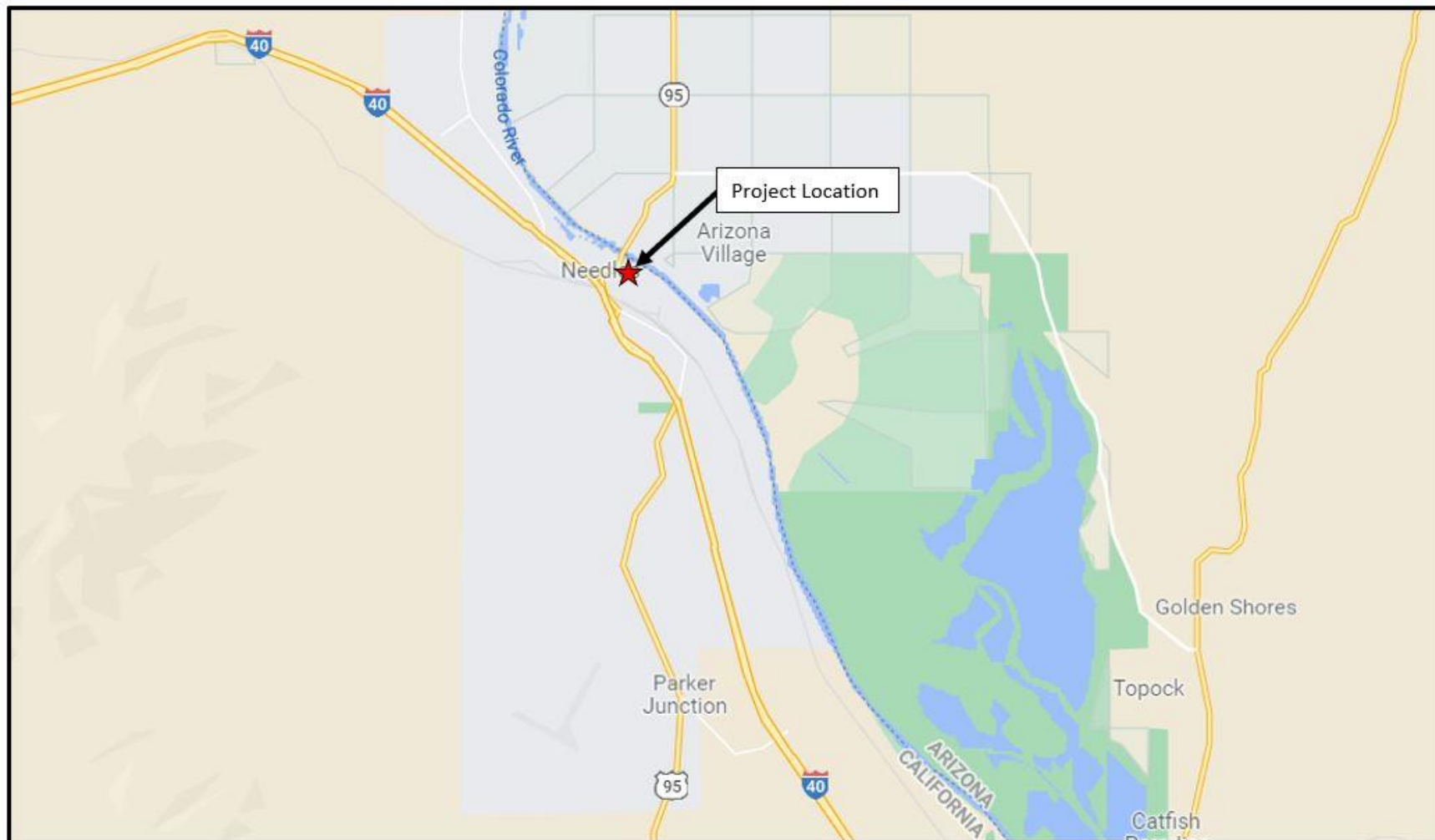
1.0 Introduction

This report summarizes the findings of a focused plant survey conducted by Pacific BioScience, Inc. on a parcel of land located along Needles Highway between North K Street and River Road in the City of Needles, California.

This survey consists of evaluated plant communities as well as the potential for the proposed project site to support any special-status plant species.

2.0 Project Location

The proposed project site is 14 acres in total size and located in the City of Needles, San Bernardino County, California (Figure 1 and 2). The proposed project site Assessor's Parcel Numbers (APN) are 0660-301-13, 0185-058-15, 0185-067-15, 0185-067-20, 0186-021-01 and 0185-109-48. The property is mapped on U.S.G.S. 7.5-minute series topographical quadrangle map Needles in Township 09 North, Range 23 East, Section 29. The proposed project site is located along Needles Highway between North K Street and River Road. Immediately north and east of the proposed project site are mobile home residences; to the west are single family residences and commercial buildings, and to the south is vacant land that borders the Rivers Edge Golf Course.



0 1 2 3 4 Miles



LEGEND

★ Project Site

FIGURE 1
Project Location

 **Pacific BioScience, Inc.**

Pacific BioScience, Inc.
156 Woodburne
Newport Beach CA 92660



0 50 150 300 600 FEET



Pacific BioScience, Inc.

LEGEND

- Project Limits
- ★ Project Site

FIGURE 2
Project Limits

3.0 Project Background & Description

The purpose of the proposed project is to provide residences of Needles Recreational Vehicle (RV) resort-style housing that offers amenities and proximity to recreational activities including boating and golfing. Riverlux Resort is a proposed Townhome/Recreational Vehicle (RV) Community in Needles, CA that will be constructed on 14 acres of land along Needles Highway between North K Street and River Road. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 sq. ft. grocery store and one free standing 20 ft. high digital billboard. The townhouses proposed for construction will consist of 128 single family townhomes which accommodate parking for RV's. There will be three models being constructed within the proposed project area and consist of single-story, two-story, and three-story models.

4.0 Methods

Literature Review

Prior to visiting the project site, a review of the California Natural Diversity Data Base (CNDDB) and Biogeographic Information Observation System (BIOS), and California Native Plant Society (CNPS) was conducted to identify if any special-status plant species are known to occur within in the vicinity. These databases identify recorded locations of special-status plants in the project vicinity and, therefore, having the potential to occur on the project site. Also reviewed prior to a site visit were aerial photographs, and relevant USGS 7.5-minute topographical quadrangles.

Field Survey Methodology

The botanical survey was conducted in accordance with the standardized guidelines for botanical and rare plant surveys issued by the United States Fish and Wildlife Service (USFWS) (1996), California Department of Fish and Wildlife (CDFW) (2009), and the California Native Plant Society (CNPS) (2001). Survey methods consist of research of the existing distribution and studies of the target species, floristic field surveys, and habitat assessment. The field survey was performed during the blooming period of most target species in order to maximize detection.

Pacific BioScience Inc. biologists Bob Schallmann and Andrew Johnstone conducted a site visit on March 27th, 2021 between the hours of 1300 and 1730. During the site visit, the skies were clear and temperatures were in the mid 70's. These temperatures were typical for the time of year and day. The entire project site was traversed on foot for assessment of the habitat and identification of common and special-status plant species.

Plant communities were noted on aerial photographs and all plant species observed were noted in a field notebook.

5.0 Results and Recommendations

Existing Conditions

The project site is disturbed from off-highway vehicles (OHV) as several dirt access roads occur within the project limits. See Appendix A for site representative photos.

Soils

A custom soil report was produced for the proposed project area using the web tool provided by the United States Department of Agriculture Natural Resources Conservation Service. No data was available for the proposed project area or areas immediately surrounding (NRCS 2021).

Plant Communities

The project site contains two plant communities: fourwing saltbush scrub and tamarisk thickets. A complete description of these plant communities are based on Sawyer and Keeler-Wolf A Manual of California Vegetation, 2nd Edition (2014) and are provided below.

Fourwing Saltbush Scrub

The fourwing saltbush (*Atriplex canescens* shrubland alliance) scrub community is dominated by a single species of saltbush, the fourwing saltbush. Fourwing saltbush scrub is a low-growing plant community with shrubs typically less than three feet (one meter) in height. This community is usually found on fine-textured, poorly-drained soils with high alkalinity and/or salinity. Additional shrub species present within the fourwing saltbush scrub within the BSA included allscale saltbush (*Atriplex polycarpa*), bush seepweed (*Suaeda moquinii*), creosote (*Larrea tridentata*), and tamarisk. This community was observed throughout the BSA and accounts for approximately 12.86 acres.

Mesquite thickets

Mesquite thickets (*Prosopis glandulosa*) consist of stands of this shrub that occurs in sand dunes or rarely flooded margins of arroyos or washes. This species was found occasionally throughout the BSA with a defined thicket at the southern edge of the BSA amounting to approximately 0.51 acres.

Tamarisk thickets

Tamarisk thickets (*Tamarix ramosissima*) consist of stands of this invasive shrub that occurs in arroyo margins, lake margins, ditches, washes, rivers, and other water courses. Two distinct thickets were observed within the BSA and amount to approximately 0.45 acres.

A visual representation of the plant communities observed within the proposed project site are below as Figure 3.



Pacific BioScience, Inc.

LEGEND

- Project Limits
- Fourwing Saltbush Scrub
- Mesquite Thickets
- Tamarisk Thickets

FIGURE 3
Plant Communities

Plant Species

All plant species observed within the project site are listed below.

Scientific Name	Common Name
<i>Atriplex canescens</i>	Fourwing saltbush
<i>Atriplex lentiformis</i>	Big saltbush
<i>Brassica</i> sp.	Mustard*
<i>Encelia frutescens</i>	Button brittlebush
<i>Larrea tridentata</i>	Creosote bush
<i>Parkinsonia florida</i>	Blue paloverde
<i>Prosopis glandulosa</i>	Honey mesquite
<i>Suaeda moquinii</i>	Bush seepweed
<i>Tamarisk</i> sp.	Tamarisk*

*Denotes non-native species

One special-status plant, spiny-hair blazing star (*Mentzelia tricuspis*), is noted as occurring within the region of the project site (CDFW 2021). Below is a description of habitat requirements of this special-status plant.

Table 1: Special Status Plant Species Potentially Occurring within the Project Region

Scientific Name Common Name	Status	Habitat Requirements	Rationale	Potential for Occurrence/ Conclusion
PLANTS				
<i>Mentzelia tricuspis</i> Spiny-hair blazing star	CNPS List 2B.1	Mojavean desert scrub; sandy or gravelly slopes and washes, 150-1280 m.	Marginal suitable habitat occurs on site. Low quality disturbed habitat.	Low potential to occur. Not observed during survey.

Spiny-hair blazing star has the potential to occur onsite however no individual plants of this species were observed during the site visit.

To ensure maximum detection of the target species of spiny-hair blazing star, a reference site was selected where known populations occur (approximately 11 miles northwest of the project site). Spiny-hair blazing star was observed at the reference site and in full bloom. No spiny-hair blazing star was observed within the project site. It is recommended that focused plant surveys be conducted prior to project implementation.

6.0 References

California Department of Fish and Game (CDFG). 2005. Biogeographic Information and Observation System (BIOS 5). Website: <https://map.dfg.ca.gov/bios/>. Accessed March 20, 2019.

California Department of Fish and Wildlife (CDFW). 2015. CNDDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx>. Accessed March 10, 2021.

California Native Plant Society (CNPS). 2015. Rare Plant Program. Website: <http://www.rareplants.cnps.org>. Accessed March 10, 2021.

Holland, R. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California, Sacramento: California Department of Fish and Wildlife.

Soil Survey Staff. 2015. Natural Resources Conservation Service: Official Soil Series Descriptions. Website: <http://www.nrcs.usda.gov/>. Accessed March 10, 2021.

United States Fish and Wildlife Service (USFWS). 2011. Environmental Conservation Online System: U.S. FWS Threatened and Endangered Species Active Critical Habitat Report (online mapper). Website: <http://ecos.fws.gov/ecp/report/table/critical-habitat.html>. Accessed March 10, 2021.

United States Geological Survey (USGS). 2012. Needles, California 7.5-Minute Topographic Quadrangle Map. Washington, D.C.: U.S. Government Printing Office.

Appendix A: Representative Site Photos







APPENDIX F

Jurisdictional Determination

Riverlux Resort

JURISDICTIONAL DETERMINATION

May 2022

Prepared for:

Riverlux Resort
29991 Canyon Hills Road Suite 1709 PMB-300
Lake Elsinore, CA 92532

Prepared by:

Jeff Johnson
Pacific BioScience, Inc.
156 Woodburne
Newport Beach, California 92660



Pacific BioScience, Inc.

Jurisdictional Determination

for

Riverlux Resort

May 2022

Prepared By: 

Date: 5/23/22

Jeff Johnson
Principal Biologist
(805) 750-3474
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156 Woodburne
Newport Beach, CA 92660
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Table of Contents

1.0	Introduction	5
2.0	Project Location.....	5
3.0	Project Background & Description.....	8
4.0	Regulatory Background Information	8
5.0	Methods.....	12
6.0	Results and Recommendations	14
7.0	References	16

List of Figures

Figure 1: Project Location6
Figure 2: Project Limits7
Figure 3: Soil Pit Locations..... 13

List of Appendices

Appendix A: NWI Mapper 17
Appendix B: NRCS Soil Map Survey 18
Appendix C: Wetland Determination Data Forms..... 19
Appendix D: Soil Pit Photographs..... 31

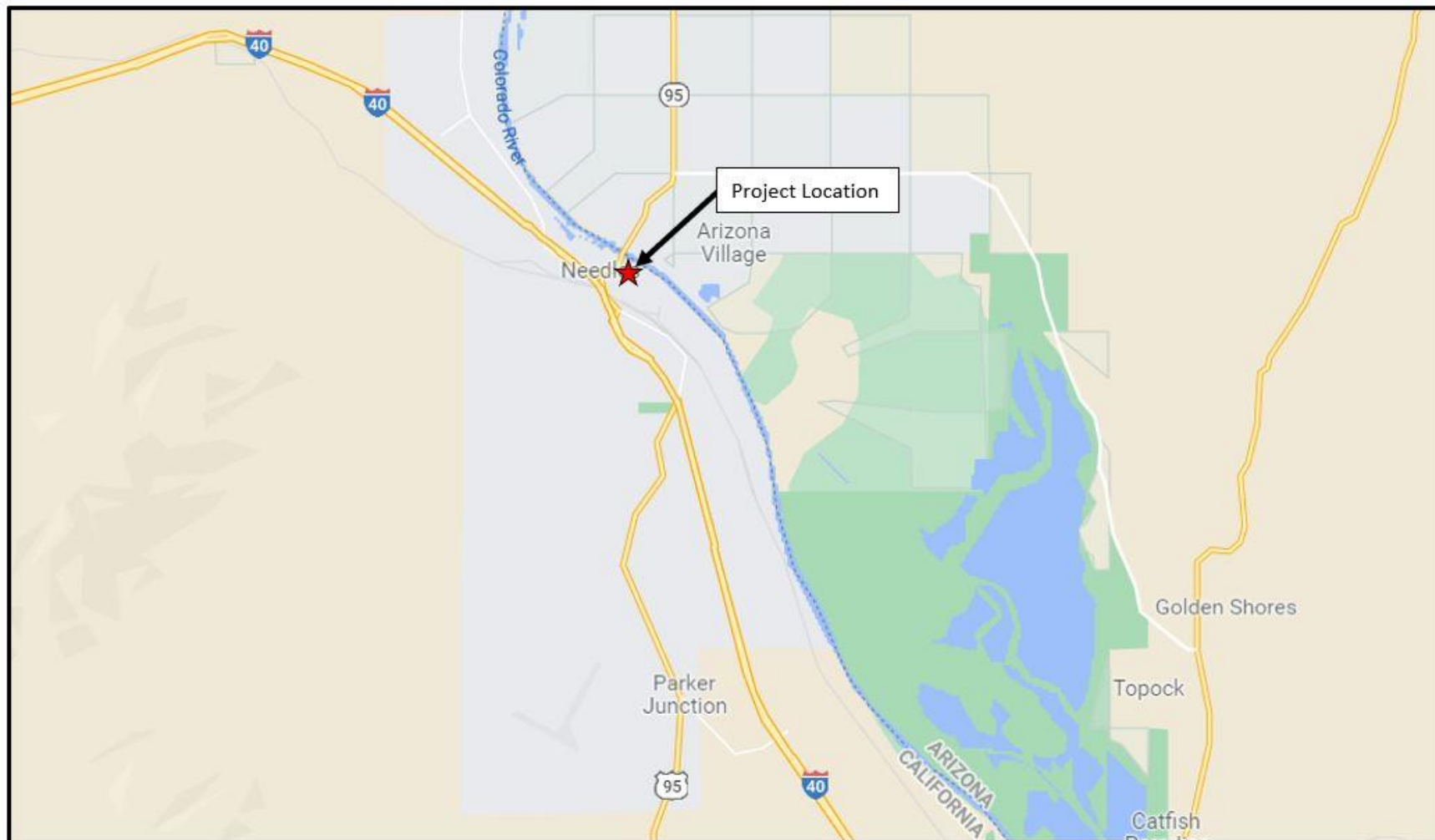
1.0 Introduction

This report summarizes the findings of a jurisdictional determination conducted by Pacific BioScience, Inc. on a parcel of land located along Needles Highway between North K Street and River Road in the City of Needles, California.

The presence of features having potential to be under the jurisdiction of the Army Corps of Engineers (ACOE) or the California Department of Fish and Wildlife (CDFW), i.e. wetlands or waterways, were determined.

2.0 Project Location

The proposed project site is 14 acres in total size and located in the City of Needles, San Bernardino County, California (Figure 1 and 2). The proposed project site Assessor's Parcel Numbers (APN) are 0660-301-13, 0185-058-15, 0185-067-15, 0185-067-20, 0186-021-01 and 0185-109-48. The property is mapped on U.S.G.S. 7.5-minute series topographical quadrangle map Needles in Township 09 North, Range 23 East, Section 29. The proposed project site is located along Needles Highway between North K Street and River Road. Immediately north and east of the proposed project site are mobile home residences; to the west are single family residences and commercial buildings, and to the south is vacant land that borders the Rivers Edge Golf Course.



LEGEND

 Project Site

FIGURE 1
Project Location


Pacific BioScience, Inc.

Pacific BioScience, Inc.
156 Woodburne
Newport Beach CA 92660



0 50 150 300 600 FEET

LEGEND

- Project Limits
- ★ Project Site

FIGURE 2
Project Limits



 Pacific BioScience, Inc.

Pacific BioScience, Inc.
156 Woodburne
Newport Beach CA 92660

3.0 Project Background & Description

The purpose of the proposed project is to provide residences of Needles Recreational Vehicle (RV) resort-style housing that offers amenities and proximity to recreational activities including boating and golfing. Riverlux Resort is a proposed Townhome/Recreational Vehicle (RV) Community in Needles, CA that will be constructed on 14 acres of land along Needles Highway between North K Street and River Road. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 sq. ft. grocery store. The townhouses proposed for construction will consist of 128 single family townhomes which accommodate parking for RV's. There will be three models being constructed within the proposed project area and consist of single-story, two-story, and three-story models.

4.0 Regulatory Background Information

Regional Water Quality Control Board (RWQCB)

The RWQCB regulates activities within state and federal waters under Section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Section 401 of the CWA requires that “any applicant for a Federal permit for activities that involve a discharge to Waters of the United States, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.” Therefore, in California, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification or waiver from the RWQCB. Although the Water Quality Certification must be sought for the same effects to waters of the United States as indicated in a Section 404 permit, certification can also cover effects to water bodies that are not USACE jurisdictional (i.e., isolated wetlands).

The RWQCB regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the state” (Water Code 13260(a)), pursuant to provisions of the state Porter-Cologne Act. The RWQCB takes jurisdiction of surface waters that are outside of the jurisdiction of USACE as “Waters of the State”, which generally includes all surface water features. Under this Act, the RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body or lack of an OHWM. Waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code 13050 (e)).

Additional information regarding Waters of the State taken from Staff Report March 2019 “State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State” follows:

CLEAN WATER ACT

“In 1972, Congress enacted the CWA to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. The CWA is the primary federal law controlling water pollution in the United States, which applies to all “waters of the United States,” including many wetlands. Waters of the United States are defined by U.S. EPA and the Corps in federal regulations and roughly comprise the nation’s navigable waters, and tributaries to those waters, that have a connection to interstate commerce. Under CWA section 303(c), the states are primarily responsible for the adoption and periodic review of water quality standards for all waters within their boundaries, with oversight by the U.S. EPA. Water quality standards consist of designated beneficial uses of waters, water quality objectives to protect beneficial uses, and an anti-degradation policy. The State Water Board is designated as the state water pollution control agency for all purposes under the CWA.

Section 301 of the CWA prohibits the discharge of any pollutant except in accord with certain other provisions of the Act, including the permit program under CWA section 404 that authorizes the issuance of permits by the Corps for the discharge of dredged or fill material. Section 502 of the CWA defines “pollutant” as “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.” Dredged or fill material is thus considered a pollutant under the CWA.

Under section 404 of the CWA, the Corps and U.S. EPA regulate discharges of dredged or fill material to waters of the United States, pursuant to the federal Guidelines.³⁴ In addition, under section 401 of the CWA, applicants for section 404 permits must also receive a section 401 water quality certification from the state from which the discharge originates to ensure that the project will comply with all applicable provisions of the CWA and state water quality standards.”

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Act provides a framework to protect water quality in California. The Porter-Cologne Act was enacted in 1969 as Division 7 of the Water Code, and is the primary water quality law in California. The Porter-Cologne Act addresses two primary functions: water quality control planning and waste discharge regulation. The State Legislature, in adopting the Porter-Cologne Act, directed that California’s

waters “shall be regulated to attain the highest water quality which is reasonable” and charges the Water Boards with protecting all waters of California, defined as “any surface water or groundwater, including saline waters, within the boundaries of the State.” This encompasses all waters of the state, including those not under federal jurisdiction.

This statute identifies the nine major hydrologic basins in the state, establishes the Regional Water Boards with responsibility for each basin, and directs that each Regional Water Board adopt a water quality control plan (basin plan).³⁷ Each basin plan identifies the beneficial uses of all waters in the basin, specifies numeric and narrative water quality objectives needed to protect the uses, and presents an implementation strategy. The Porter-Cologne Act further requires that anyone who plans to discharge waste where it might affect waters of the state must first notify the Water Boards. The Water Boards identify the sources of pollutants that threaten the quality of the state's waters and regulate those sources by imposing requirements to control the discharge of pollutants in permits. The Porter-Cologne Act also provides a variety of civil and criminal enforcement tools.

Under the Porter-Cologne Act, the Water Boards regulate waste discharges that could affect water quality by issuing WDRs. Discharges of dredged or fill material have historically been treated as discharges of waste by the Water Boards. It is the longstanding interpretation of the State Water Board that the definition of “waste” set forth in Water Code section 13050(e) includes dredged or fill material. (Mem. from William R. Attwater, State Water Resources Control Board, to Danny Walsh, Board member (July 28, 1987).) In 1972, the California Legislature amended the Porter-Cologne Act to provide the state the necessary authority to implement CWA section 402, or the National Pollutant Discharge Elimination System (NPDES), in lieu of a U.S. EPA-administered program under the CWA. The Water Boards issue some WDRs that also serve as NPDES permits. Subsequent amendments have allowed the Water Boards to assume most of the responsibilities of the CWA, including the CWA section 404 permit program. To date, California has not applied for the 404 program.

The State Water Board oversees and guides the Regional Water Boards through several activities, including the adoption of regional water quality control plans and policies for water quality control. The State Water Board is also charged with adopting state plans and policies for water quality control, which may consist of principles or guidelines deemed essential by the State Water Board for water quality control. State policies³⁸ address water quality concerns for surface and groundwater that overlap regional board boundaries, are statewide in scope, or are otherwise considered significant.

The Water Boards require that discharges to high quality waters³⁹ comply with State Water Board Resolution No. 68-16, “Statement of Policy with Respect to Maintaining High Quality of Waters in California,” which generally requires that high

quality waters be protected. The California anti-degradation policy also incorporates the federal anti-degradation policy which requires the maintenance and protection of existing uses and water quality conditions necessary to support such uses. In addition, the federal anti-degradation policy maintains and protects water quality in outstanding national resource waters.

REGULATION OF DISCHARGES OF DREDGED OR FILL MATERIAL IN CALIFORNIA

The regulation of dredged or fill material is accomplished through federal and state regulations. Applicants must comply with section 404 and section 401 of the CWA as well as the Porter-Cologne Act. In California, applicants must obtain a 401 certification for projects that receive a federal license or permit, such as a section 404 permit from the Corps, if waters that would be impacted fall under federal jurisdiction. If a project impacts waters of the state that do not fall under federal jurisdiction, the applicant need not obtain a section 404 permit or a 401 certification, but instead must receive approval from the Water Boards through the adoption of WDRs. Lastly, if a project would impact both waters inside and outside of federal jurisdiction an applicant would obtain a combination 401 certification/WDRs from the Water Boards and a section 404 permit from the Corps.

Federal and State Regulatory Framework for Dredge or Fill Discharges under Individual Orders

Discharges of dredged or fill material to waters of the state must comply with federal and state requirements. The Corps has primary permitting authority for CWA section 404, subject to U.S. EPA approval, and issues individual and general permits. The Corps issues individual permits for specific discharges, and general permits for classes of activities on a regional, programmatic or nationwide basis. An applicant must obtain a section 404 permit from the Corps before discharging dredged or fill material into waters of the United States.

When applying for individual section 404 permits, applicants are subject to comprehensive review under the federal Guidelines. Under these regulations, the applicant must demonstrate that three steps, in the following sequence, have been taken to reduce impacts to federal waters: first, all practicable measures to avoid impacts to federal waters must be exhausted; second, minimization measures must be incorporated into the project design to further reduce any remaining impacts; and lastly, if after all practicable avoidance and minimization measures have been applied, the applicant must provide compensatory mitigation for any unavoidable impacts. The applicant is required to provide this information as an “alternatives analysis” when applying for an individual permit. Under the federal Guidelines, the Corps is required to select the least environmentally damaging practicable alternative (LEDPA) for the project. For projects that impact waters of the state that are also under federal regulation, an applicant must obtain a section 404 permit

from the Corps and a section 401 water quality certification from the Water Boards verifying that the project will comply with state water quality standards. For projects that would impact waters of the state that are outside federal jurisdiction, applicants must obtain WDRs from the Water Boards. In cases when a project may impact waters of the state that include waters both inside and outside of federal jurisdiction, an applicant must obtain a section 404 permit from the Corps, and a combination section 401 certification and WDRs from the Water Boards.”

5.0 Methods

Literature Review

Prior to visiting the project site, a review of the United States Fish and Wildlife National Wetlands Inventory (NWI) Mapper was conducted to identify any potential wetlands or riparian systems within the proposed project area (Appendix A). Additionally, a soil map was created for the proposed project area through the United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey (Appendix B). Aerial photographs and relevant USGS 7.5-minute topographical quadrangles were reviewed prior to the site visit.

Field Survey Methodology

Pacific BioScience Inc. biologist, Andrew Johnstone, conducted a site visit on May 21st, 2022 between the hours of 1200-1500. The temperature reached 91°F with clear skies which is typical for the time of year and day. The entire project site was traversed on foot and any potential wetlands or waterways under jurisdiction of the Army Corp of Engineers, California Department of Fish and Wildlife, or California Regional Water Quality Control Board were identified.

Delineation of wetlands was conducted in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Region Supplement, Version 2.0) (USACE 2008b). At suspected wetland locations, data point locations were sampled as to their vegetation, hydrology, and soils. Points were also taken situated outside the limits of the estimated wetland area. This data was used to support a determination of wetland or non-wetland status. All wetland data were recorded on Arid West Region - Wetland Determination Data Forms (Appendix C) and photographs of each soil pit was taken (Appendix D). A soil pit was excavated to a depth of 18 inches at each data point. The soil was then examined for presence or absence of hydric soil indicators. The matrix color and mottle color (if present) of the soil was determined using the Munsell Soil Color Charts. Features with no evidence of wetland hydrology, and which supported only upland vegetation, were evaluated for upward



- LEGEND**
- Project Limits
 - Soil Pit Locations (#1-6)

FIGURE 3
Soil Pit Locations



6.0 Results and Recommendations

Literature Review

A search of the NWI Mapper revealed the project contains “Freshwater Forested/Shrub Wetland” at the southern and south eastern extent of the project limits (USFWS NWI 2022). The web soil survey generated through NRCS did not have any digital data available for soils within the action area (See Appendix A: Soil Survey Report).

Existing Conditions

The proposed project site is undeveloped and relatively flat. Evidence of OHV use, and minor amounts of illegal dumping is present throughout the site.

Vegetation

The dominant plant community within the proposed project area is fourwing saltbush scrub. Species of plants generally associated with this vegetation community include cheesebush (*Ambrosia salsola*), white bursage (*Ambrosia dumosa*), four-wing saltbush (*Atriplex canescens*), and Nevada tea (*Ephedra nevadensis*). Additionally, mesquite (*Prosopis glandulosa*) and tamarisk (*Tamarix ramosissima*) thickets occur near the southern edge of the proposed project area.

Soils

No digital data was available for the action area generated through the NRCS Web Soils Survey. Based off observation through site visits and knowledge of the surrounding area, the soils consist of very deep excessively drained soils that appear to form in stratified stream alluvium akin to Lagunita sand.

Jurisdictional Features

The project site was evaluated for the presence of hydrologic features under state and federal jurisdiction. No drainage features were observed within the proposed project area that meet the definition of State or Federal jurisdictional. The jurisdictional determination was conducted based on the NWI mapper that identifies a portion of the southern edge of the proposed project site designated as “Freshwater forested/Shrub wetland” (Appendix A). However, upon a field review, it was determined that no jurisdictional features occur within the proposed project area.

Historically, a portion of the proposed project site may have been subject to flooding due to the close proximity to the Colorado River and sandy alluvium present onsite. Typically, mapping efforts such as the NWI mapper utilize a broad-brush stroke

approach for categorizing riparian or wetland areas. However, the lack of hydric soils, hydrological features, and non-obligatory wetland plants on-site conclude that although mapped as freshwater forested/shrub wetland on NWI, the proposed project site is not categorized as such and therefore has no definable state or federal jurisdictional resources present onsite.

7.0 References

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U.S. Fish and Wildlife Service

National Wetlands Inventory

Riverlux Resort



May 26, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Mojave Desert Area, California

Riverlux Resort



December 7, 2021

Preface

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

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

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

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

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Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map (Riverlux Resort).....	9
Legend.....	10
Map Unit Legend (Riverlux Resort).....	11
Map Unit Descriptions (Riverlux Resort).....	11
Mojave Desert Area, California.....	13
NOTCOM—No Digital Data Available.....	13
References	14

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

Custom Soil Resource Report

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

Soil Map

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

Custom Soil Resource Report Soil Map (Riverlux Resort)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Mojave Desert Area, California
Survey Area Data: Version 19, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 13, 2016—Sep 28, 2017

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

Map Unit Legend (Riverlux Resort)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
NOTCOM	No Digital Data Available	13.0	100.0%
Totals for Area of Interest		13.0	100.0%

Map Unit Descriptions (Riverlux Resort)

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

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

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

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

Custom Soil Resource Report

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

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

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

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

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

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

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

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

Mojave Desert Area, California

NOTCOM—No Digital Data Available

Map Unit Composition

Notcom: 100 percent

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

Description of Notcom

Properties and qualities

References

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles / San Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jeff West State: CA Sampling Point: 1
 Investigator(s): Andrew Johnstone Section, Township, Range: S-29, T-9N, R-23E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.846923 Long: -114.607857 Datum: NAD83
 Soil Map Unit Name: No Digital Data Available NWI classification: Freshwater forested/shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Although matrix present, it is considered FAC and can occur in non-wetland/saturated soils such as the location of this sampling point.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u> Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u>Tamarix ramosissima</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>5</u>				
Sapling/Shrub Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Herb Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Woody Vine Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>5</u>				
% Bare Ground in Herb Stratum <u>95</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Dry, sandy area. Only hydrophytic vegetation present because Tamarix is consid.
 FAC. ~~Herb, shrub, and woody~~

Sampling Point: 1

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	No	X
----------------------	-----	----	---

Fine/coarse sand. No redox features present.

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

- ☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No hydrological features present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles/San Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jett west State: CA Sampling Point: 2
 Investigator(s): Andrew Jonstone Section, Township, Range: S-29, T-9N, R-23E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.847192 Long: -114.607585 Datum: NAD83
 Soil Map Unit Name: No Digital Data Available NWI classification: Freshwater forested/Shrub Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Although within NWI area, no indicators of saturation or wetlands were observed through vegetation, soils, and hydrology</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum 1. <u>Arriplex canescens</u> <u>10%</u> <u>Y</u> <u>UPL</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> Total Cover: <u> </u>				
Herb Stratum 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> Total Cover: <u> </u>				
Woody Vine Stratum 1. <u> </u> 2. <u> </u> Total Cover: <u>10</u>				
% Bare Ground in Herb Stratum <u>90</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
18	10YR 4/4	100					Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No redox features present. Very fine sand.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____Water Table Present? Yes _____ No X Depth (inches): _____Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrologic indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles/San Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jeff West State: CA Sampling Point: 3
 Investigator(s): Andrew Johnstone Section, Township, Range: S-29, T-9N, R-23E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.847173 Long: -114.607898 Datum: NAD 83
 Soil Map Unit Name: No Digital Data Available NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Although tamarix present, is considered FAC and can occur in non-wetland areas such as the location of sampling point.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Tamarix ramosissima</u>	<u>15%</u>	<u>Y</u>	<u>FAC</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>15</u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Herb Stratum				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>15</u>				
% Bare Ground in Herb Stratum <u>85</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
18	10YR	3/4	100					Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

No redox features present. Fine/coarse sand.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (Nonriverine)
- ☐ Sediment Deposits (B2) (Nonriverine)
- ☐ Drift Deposits (B3) (Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrologic indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles/Sun Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jeff West State: CA Sampling Point: 4
 Investigator(s): Andrew Johnstone Section, Township, Range: S-29, T-4N, R-23E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.846864 Long: -114.608453 Datum: NAD83
 Soil Map Unit Name: No Digital Data Available NWI classification: Freshwater Forested/Shrub wetland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Although within NWI area, no indicators of wetland from vegetation, soil, or hydrology.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u>Prosopis glandulosa</u>	<u>90</u>	<u>Y</u>	<u>UPL</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Herb Stratum				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Total Cover: <u>90</u>				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
18	10YR 4/4	100						Silty sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) | ☐ 1 cm Muck (A9) (LRR C) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) | ☐ 2 cm Muck (A10) (LRR B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) | ☐ Reduced Vertic (F18) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) | ☐ Red Parent Material (TF2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) | |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) | |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) | |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) | |
| ☐ Sandy Gleyed Matrix (S4) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No redox features present. Mostly fine sand with intermittent silt

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Water Marks (B1) (Riverine) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) | ☐ Sediment Deposits (B2) (Riverine) |
| ☐ Saturation (A3) | ☐ Aquatic Invertebrates (B13) | ☐ Drift Deposits (B3) (Riverine) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) | ☐ Dry-Season Water Table (C2) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) | ☐ Thin Muck Surface (C7) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Plowed Soils (C6) | ☐ Crayfish Burrows (C8) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Water-Stained Leaves (B9) | | ☐ Shallow Aquitard (D3) |
| | | ☐ FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____Water Table Present? Yes _____ No X Depth (inches): _____Saturation Present? Yes _____ No X Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrological indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles / San Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jeff West State: CA Sampling Point: 45
 Investigator(s): Andrew Johnstone Section, Township, Range: S-29, T-9N, R-23E
 Landform (hillslope, terrace, etc.): Flt Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.846861 Long: -114.608852 Datum: NAD83
 Soil Map Unit Name: No Digital Data Available NWI classification: Fresh water Forested / Shrub Wetland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Although within mapped NWI area, no indicators of wetland from vegetation, soils or hydrology present.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u>Prosopis glandulosa</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u> </u>				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum 1. <u>Pluchea sericea</u> <u>30</u> <u>Y</u> <u>FAC</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u> </u>				Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum 1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
Total Cover: <u> </u>				¹ Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum 1. <u> </u>				
2. <u> </u>				
Total Cover: <u>70</u>				
% Bare Ground in Herb Stratum <u>30</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Riverlux Resort City/County: Needles / San Bernardino Sampling Date: 5/21/22
 Applicant/Owner: Jeff West State: CA Sampling Point: 6
 Investigator(s): Andrew Johnstone Section, Township, Range: S-29, T-9N, R-23E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): Interior Deserts Lat: 34.847146 Long: -114.608709 Datum: NAD83
 Soil Map Unit Name: No Digital Data Available NWI classification: None (upland)
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: <u>Outside of NWI and is expected to show no sign of saturation.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Tamaria ramosissima</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet:
Total Cover: <u>25</u>				
Sapling/Shrub Stratum				Total % Cover of: <u> </u> Multiply by: <u> </u>
1. <u>Atriplex canescens</u>	<u>15</u>	<u>Y</u>	<u>UPL</u>	OBL species <u> </u> x 1 = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x 2 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x 3 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x 4 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	UPL species <u> </u> x 5 = <u> </u>
Total Cover: <u>15</u>				Column Totals: <u> </u> (A) <u> </u> (B)
Herb Stratum				Prevalence Index = B/A = <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>0</u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Woody Vine Stratum				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Remarks:
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
Total Cover: <u>40</u>				
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>				

Sampling Point: 6

HYDROLOGY

Scanned with CamScanner

Appendix D: Soil Pit Photographs



Soil Pit #1

Appendix D: Soil Pit Photographs



Soil Pit #2

Appendix D: Soil Pit Photographs



Soil Pit #3

Appendix D: Soil Pit Photographs



Soil Pit #4

Appendix D: Soil Pit Photographs



Soil Pit #5

Appendix D: Soil Pit Photographs



Soil Pit #6

APPENDIX G

Hydrology Study

TRACT NO. 20478
HYDROLOGY REPORT

PREPARED FOR:

RIVERLUX RESORT

29991 CANYON HILLS ROAD
SUITE 1709 PMB-300
LAKE ELSINORE, CA 92532
(951) 553-0599

PREPARED BY:

raab engineering

21851 NEWLAND STREET SPACE 30
HUNTINGTON BEACH, CA 92646
(951) 255-4044

PREPARED UNDER THE SUPERVISION OF:



MARK L. RAAB RCE 29616

12/18/21

DATE



TRACT NO. 20478
HYDROLOGY REPORT

PREPARED FOR:

RIVERLUX RESORT

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(951) 255-4044

PREPARED UNDER THE SUPERVISION OF:



MARK L. RAAB RCE 29616

12/18/21

DATE



Red 1-4-2022
ck

TRACT NO. 20478

CALCULATION PARAMETERS



NOAA Atlas 14, Volume 6, Version 2
Location name: Needles, California, USA*
Latitude: 34.8492°, Longitude: -114.6094°
Elevation: 480.36 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

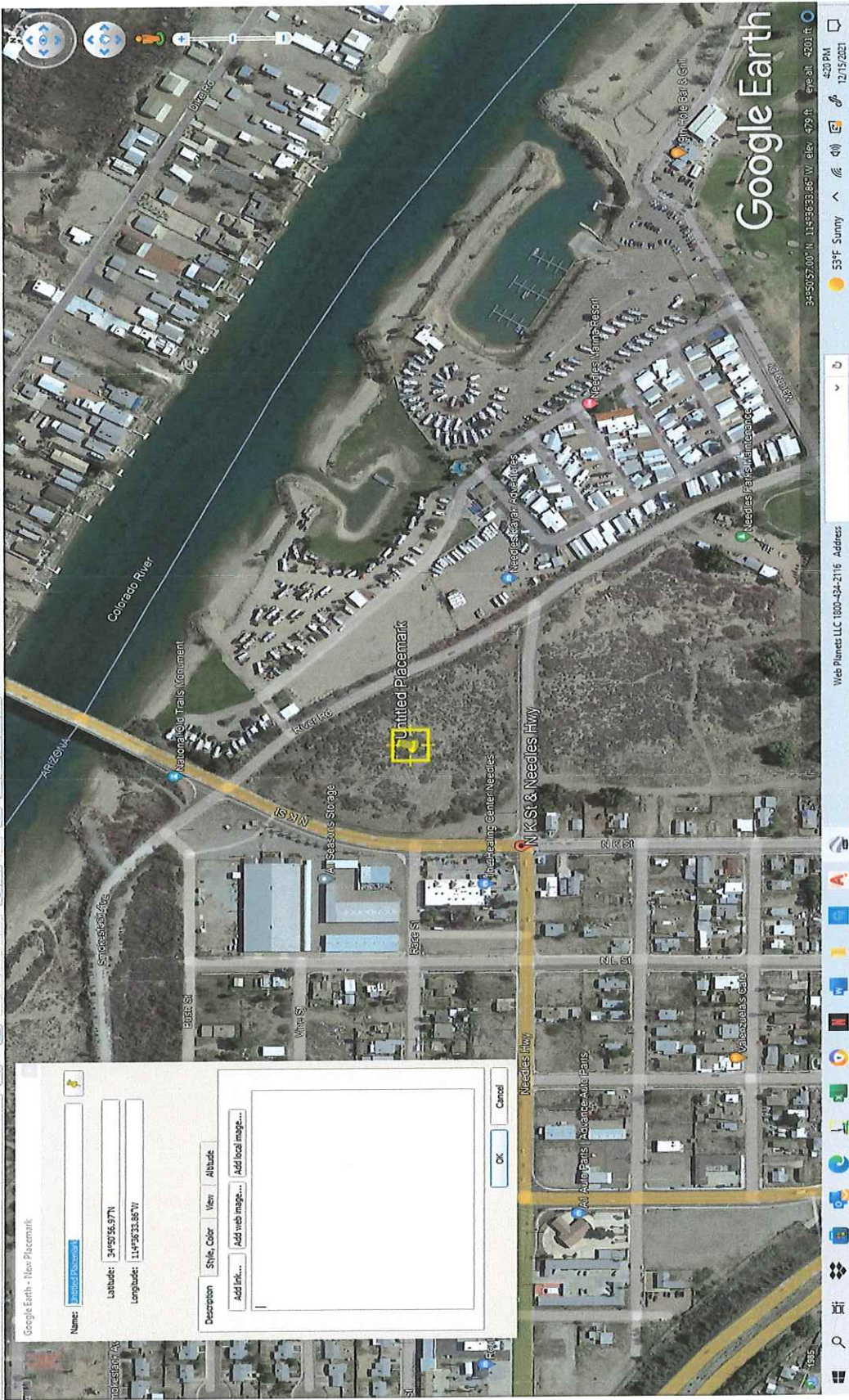
NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.01 (0.864-1.20)	1.70 (1.44-2.03)	2.69 (2.28-3.20)	3.56 (2.99-4.28)	4.86 (3.92-6.07)	5.94 (4.69-7.61)	7.13 (5.47-9.37)	8.45 (6.29-11.5)	10.4 (7.38-14.8)	13.2 (9.00-19.4)
10-min	0.726 (0.618-0.858)	1.22 (1.04-1.45)	1.93 (1.63-2.30)	2.55 (2.14-3.07)	3.48 (2.81-4.35)	4.26 (3.36-5.45)	5.11 (3.92-6.72)	6.05 (4.51-8.21)	7.45 (5.29-10.6)	9.43 (6.45-13.9)
15-min	0.584 (0.496-0.692)	0.984 (0.836-1.17)	1.55 (1.32-1.85)	2.06 (1.73-2.48)	2.80 (2.27-3.51)	3.43 (2.71-4.39)	4.12 (3.16-5.42)	4.88 (3.63-6.62)	6.00 (4.27-8.53)	7.60 (5.20-11.2)
30-min	0.398 (0.340-0.474)	0.672 (0.572-0.800)	1.06 (0.900-1.27)	1.41 (1.18-1.70)	1.92 (1.55-2.40)	2.35 (1.85-3.01)	2.82 (2.16-3.71)	3.34 (2.48-4.53)	4.11 (2.92-5.84)	5.20 (3.56-7.68)
60-min	0.280 (0.239-0.333)	0.473 (0.401-0.562)	0.747 (0.633-0.891)	0.989 (0.830-1.19)	1.35 (1.09-1.69)	1.65 (1.30-2.11)	1.98 (1.52-2.61)	2.35 (1.75-3.18)	2.89 (2.05-4.10)	3.66 (2.50-5.40)
2-hr	0.196 (0.166-0.233)	0.308 (0.262-0.366)	0.464 (0.394-0.554)	0.598 (0.502-0.721)	0.792 (0.640-0.990)	0.950 (0.750-1.22)	1.12 (0.860-1.47)	1.30 (0.969-1.77)	1.57 (1.11-2.22)	1.85 (1.26-2.73)
3-hr	0.152 (0.129-0.180)	0.231 (0.196-0.275)	0.341 (0.288-0.406)	0.434 (0.364-0.522)	0.567 (0.459-0.709)	0.675 (0.533-0.864)	0.789 (0.606-1.04)	0.912 (0.679-1.24)	1.09 (0.773-1.55)	1.23 (0.841-1.82)
6-hr	0.094 (0.080-0.112)	0.137 (0.117-0.163)	0.196 (0.166-0.234)	0.246 (0.206-0.296)	0.317 (0.256-0.396)	0.374 (0.295-0.478)	0.434 (0.333-0.570)	0.497 (0.370-0.675)	0.588 (0.418-0.835)	0.661 (0.452-0.976)
12-hr	0.054 (0.046-0.064)	0.076 (0.064-0.090)	0.106 (0.090-0.127)	0.132 (0.111-0.159)	0.170 (0.137-0.212)	0.200 (0.158-0.256)	0.232 (0.178-0.305)	0.266 (0.198-0.362)	0.316 (0.224-0.449)	0.356 (0.244-0.526)
24-hr	0.034 (0.030-0.040)	0.047 (0.041-0.054)	0.065 (0.057-0.075)	0.080 (0.070-0.094)	0.103 (0.087-0.124)	0.122 (0.101-0.150)	0.142 (0.115-0.179)	0.164 (0.130-0.212)	0.196 (0.150-0.263)	0.223 (0.165-0.309)
2-day	0.019 (0.017-0.022)	0.025 (0.022-0.029)	0.034 (0.030-0.039)	0.042 (0.036-0.049)	0.053 (0.045-0.064)	0.063 (0.052-0.077)	0.073 (0.059-0.092)	0.085 (0.067-0.110)	0.102 (0.078-0.137)	0.117 (0.086-0.161)
3-day	0.013 (0.012-0.015)	0.017 (0.015-0.020)	0.023 (0.021-0.027)	0.029 (0.025-0.034)	0.037 (0.031-0.044)	0.043 (0.036-0.053)	0.050 (0.041-0.063)	0.059 (0.046-0.075)	0.071 (0.054-0.095)	0.081 (0.060-0.112)
4-day	0.011 (0.009-0.012)	0.014 (0.012-0.016)	0.018 (0.016-0.021)	0.022 (0.020-0.026)	0.029 (0.024-0.034)	0.034 (0.028-0.042)	0.039 (0.032-0.050)	0.046 (0.036-0.059)	0.055 (0.042-0.074)	0.064 (0.047-0.088)
7-day	0.006 (0.006-0.007)	0.008 (0.007-0.009)	0.011 (0.009-0.012)	0.013 (0.011-0.015)	0.016 (0.014-0.020)	0.019 (0.016-0.024)	0.023 (0.018-0.029)	0.026 (0.021-0.034)	0.032 (0.025-0.043)	0.037 (0.027-0.051)
10-day	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.010 (0.008-0.011)	0.012 (0.010-0.015)	0.014 (0.012-0.018)	0.017 (0.014-0.021)	0.020 (0.015-0.025)	0.024 (0.018-0.032)	0.027 (0.020-0.038)
20-day	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.006-0.009)	0.009 (0.007-0.011)	0.010 (0.008-0.013)	0.012 (0.009-0.016)	0.014 (0.010-0.019)
30-day	0.002 (0.002-0.002)	0.002 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.006)	0.006 (0.005-0.007)	0.007 (0.005-0.008)	0.008 (0.006-0.010)	0.009 (0.007-0.012)	0.010 (0.007-0.014)
45-day	0.001 (0.001-0.002)	0.002 (0.002-0.002)	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.005)	0.005 (0.004-0.006)	0.005 (0.004-0.007)	0.006 (0.005-0.008)	0.007 (0.005-0.009)	0.007 (0.005-0.010)
60-day	0.001 (0.001-0.001)	0.002 (0.001-0.002)	0.002 (0.002-0.003)	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.005)	0.004 (0.004-0.006)	0.005 (0.004-0.006)	0.006 (0.004-0.007)	0.006 (0.004-0.008)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for





NOAA Atlas 14, Volume 6, Version 2
Location name: Needles, California, USA*
Latitude: 34.8476°, Longitude: -114.6088°
Elevation: 477.16 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.01 (0.864-1.20)	1.70 (1.44-2.03)	2.69 (2.28-3.20)	3.56 (2.99-4.28)	4.86 (3.92-6.07)	5.94 (4.69-7.61)	7.13 (5.47-9.37)	8.45 (6.29-11.5)	10.4 (7.38-14.8)	13.2 (9.00-19.4)
10-min	0.726 (0.618-0.858)	1.22 (1.04-1.45)	1.93 (1.63-2.30)	2.55 (2.14-3.07)	3.48 (2.81-4.35)	4.26 (3.36-5.45)	5.11 (3.92-6.72)	6.05 (4.51-8.21)	7.45 (5.29-10.6)	9.43 (6.45-13.9)
15-min	0.584 (0.496-0.692)	0.984 (0.836-1.17)	1.55 (1.32-1.85)	2.06 (1.73-2.48)	2.80 (2.27-3.51)	3.43 (2.71-4.39)	4.12 (3.16-5.42)	4.88 (3.63-6.62)	6.00 (4.27-8.53)	7.60 (5.20-11.2)
30-min	0.398 (0.340-0.474)	0.672 (0.572-0.800)	1.06 (0.900-1.27)	1.41 (1.18-1.70)	1.92 (1.55-2.40)	2.35 (1.85-3.01)	2.82 (2.16-3.71)	3.34 (2.48-4.53)	4.11 (2.92-5.84)	5.20 (3.56-7.68)
60-min	0.280 (0.239-0.333)	0.473 (0.401-0.562)	0.747 (0.633-0.891)	0.989 (0.830-1.19)	1.35 (1.09-1.69)	1.65 (1.30-2.11)	1.98 (1.52-2.61)	2.35 (1.75-3.18)	2.89 (2.05-4.10)	3.66 (2.50-5.40)
2-hr	0.196 (0.166-0.233)	0.308 (0.262-0.366)	0.464 (0.394-0.554)	0.598 (0.502-0.721)	0.792 (0.640-0.990)	0.950 (0.750-1.22)	1.12 (0.860-1.47)	1.30 (0.969-1.77)	1.57 (1.11-2.22)	1.85 (1.26-2.73)
3-hr	0.152 (0.129-0.180)	0.231 (0.196-0.275)	0.341 (0.288-0.406)	0.434 (0.364-0.522)	0.567 (0.459-0.709)	0.675 (0.533-0.864)	0.789 (0.606-1.04)	0.912 (0.679-1.24)	1.09 (0.773-1.55)	1.23 (0.841-1.82)
6-hr	0.094 (0.080-0.112)	0.137 (0.117-0.163)	0.196 (0.166-0.234)	0.246 (0.206-0.296)	0.317 (0.256-0.396)	0.374 (0.295-0.478)	0.434 (0.333-0.570)	0.497 (0.370-0.675)	0.588 (0.418-0.835)	0.661 (0.452-0.976)
12-hr	0.054 (0.046-0.064)	0.076 (0.064-0.090)	0.106 (0.090-0.127)	0.132 (0.111-0.159)	0.170 (0.137-0.212)	0.200 (0.158-0.256)	0.232 (0.178-0.305)	0.266 (0.198-0.362)	0.316 (0.224-0.449)	0.356 (0.244-0.526)
24-hr	0.034 (0.030-0.040)	0.047 (0.041-0.054)	0.065 (0.057-0.075)	0.080 (0.070-0.094)	0.103 (0.087-0.124)	0.122 (0.101-0.150)	0.142 (0.115-0.179)	0.164 (0.130-0.212)	0.196 (0.150-0.263)	0.223 (0.165-0.309)
2-day	0.019 (0.017-0.022)	0.025 (0.022-0.029)	0.034 (0.030-0.039)	0.042 (0.036-0.049)	0.053 (0.045-0.064)	0.063 (0.052-0.077)	0.073 (0.059-0.092)	0.085 (0.067-0.110)	0.102 (0.078-0.137)	0.117 (0.086-0.161)
3-day	0.013 (0.012-0.015)	0.017 (0.015-0.020)	0.023 (0.021-0.027)	0.029 (0.025-0.034)	0.037 (0.031-0.044)	0.043 (0.036-0.053)	0.050 (0.041-0.063)	0.059 (0.046-0.075)	0.071 (0.054-0.095)	0.081 (0.060-0.112)
4-day	0.011 (0.009-0.012)	0.014 (0.012-0.016)	0.018 (0.016-0.021)	0.022 (0.020-0.026)	0.029 (0.024-0.034)	0.034 (0.028-0.042)	0.039 (0.032-0.050)	0.046 (0.036-0.059)	0.055 (0.042-0.074)	0.064 (0.047-0.088)
7-day	0.006 (0.006-0.007)	0.008 (0.007-0.009)	0.011 (0.009-0.012)	0.013 (0.011-0.015)	0.016 (0.014-0.020)	0.019 (0.016-0.024)	0.023 (0.018-0.029)	0.026 (0.021-0.034)	0.032 (0.025-0.043)	0.037 (0.027-0.051)
10-day	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.009)	0.010 (0.008-0.011)	0.012 (0.010-0.015)	0.014 (0.012-0.018)	0.017 (0.014-0.021)	0.020 (0.015-0.025)	0.024 (0.018-0.032)	0.027 (0.020-0.038)
20-day	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.006-0.009)	0.009 (0.007-0.011)	0.010 (0.008-0.013)	0.012 (0.009-0.016)	0.014 (0.010-0.019)
30-day	0.002 (0.002-0.002)	0.002 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.006)	0.006 (0.005-0.007)	0.007 (0.005-0.008)	0.008 (0.006-0.010)	0.009 (0.007-0.012)	0.010 (0.007-0.014)
45-day	0.001 (0.001-0.002)	0.002 (0.002-0.002)	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.005)	0.005 (0.004-0.006)	0.005 (0.004-0.007)	0.006 (0.005-0.008)	0.007 (0.005-0.009)	0.007 (0.005-0.010)
60-day	0.001 (0.001-0.001)	0.002 (0.001-0.002)	0.002 (0.002-0.003)	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.005)	0.004 (0.004-0.006)	0.005 (0.004-0.006)	0.006 (0.004-0.007)	0.006 (0.004-0.008)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

114.6088&data=intensity&units=english&series=pds#maps notes at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for



TRACT NO. 20478

EXISTING SITE CONDITIONS

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 10.0

Computed rainfall intensity:

Storm year = 10.00 1 hour rainfall = 0.989 (In.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 1

AREA A

+++++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 1 = 68.60
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.554(In/Hr)
Initial subarea data:
Initial area flow distance = 568.000(Ft.)
Top (of initial area) elevation = 378.000(Ft.)
Bottom (of initial area) elevation = 374.000(Ft.)
Difference in elevation = 4.000(Ft.)
Slope = 0.00704 s(%)= 0.70
TC = $k(0.706)*[(\text{length}^3)/(\text{elevation change})]^{0.2}$
Initial area time of concentration = 24.044 min.
Rainfall intensity = 1.712(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.609
Subarea runoff = 6.096(CFS)
Total initial stream area = 5.850(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.554(In/Hr)

AREA B

+++++
Process from Point/Station 12.000 to Point/Station 13.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 1 = 68.60
Pervious ratio(A_p) = 1.0000 Max loss rate(F_m)= 0.554(In/Hr)
Initial subarea data:
Initial area flow distance = 472.000(Ft.)
Top (of initial area) elevation = 381.200(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 6.200(Ft.)
Slope = 0.01314 s(%)= 1.31
 $TC = k(0.706)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 19.710 min.
Rainfall intensity = 1.929(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.641$
Subarea runoff = 11.828(CFS)
Total initial stream area = 9.560(Ac.)
Pervious area fraction = 1.000
Initial area F_m value = 0.554(In/Hr)
End of computations, Total Study Area = 15.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(A_p) = 1.000
Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 25.0

Computed rainfall intensity:

Storm year = 25.00 1 hour rainfall = 1.350 (In.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 2

AREA A

+++++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

SCS curve number for soil(AMC 2) = 84.00

Pervious ratio(A_p) = 1.0000 Max loss rate(F_m)= 0.301(In/Hr)

Initial subarea data:

Initial area flow distance = 568.000(Ft.)

Top (of initial area) elevation = 378.000(Ft.)

Bottom (of initial area) elevation = 374.000(Ft.)

Difference in elevation = 4.000(Ft.)

Slope = 0.00704 s(%)= 0.70

$TC = k(0.706)*[(length^3)/(elevation\ change)]^{0.2}$

Initial area time of concentration = 24.044 min.

Rainfall intensity = 2.337(In/Hr) for a 25.0 year storm

Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.784$

Subarea runoff = 10.721(CFS)

Total initial stream area = 5.850(Ac.)

Pervious area fraction = 1.000

Initial area F_m value = 0.301(In/Hr)

AREA B

+++++
Process from Point/Station 12.000 to Point/Station 13.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

SCS curve number for soil(AMC 2) = 84.00

Pervious ratio(A_p) = 1.0000 Max loss rate(F_m)= 0.301(In/Hr)

Initial subarea data:

Initial area flow distance = 472.000(Ft.)

Top (of initial area) elevation = 381.200(Ft.)

Bottom (of initial area) elevation = 375.000(Ft.)

Difference in elevation = 6.200(Ft.)

Slope = 0.01314 s(%)= 1.31

$TC = k(0.706)*[(length^3)/(elevation\ change)]^{0.2}$

Initial area time of concentration = 19.710 min.

Rainfall intensity = 2.633(In/Hr) for a 25.0 year storm

Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.797$

Subarea runoff = 20.066(CFS)

Total initial stream area = 9.560(Ac.)

Pervious area fraction = 1.000

Initial area F_m value = 0.301(In/Hr)

End of computations, Total Study Area = 15.41 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Note: These figures do not consider reduced effective area effects caused by confluences in the rational equation.

Area averaged pervious area fraction(A_p) = 1.000

Area averaged SCS curve number = 84.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 100.0

Computed rainfall intensity:

Storm year = 100.00 1 hour rainfall = 1.980 (In.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 3

AREA A

+++++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 568.000(Ft.)
Top (of initial area) elevation = 378.000(Ft.)
Bottom (of initial area) elevation = 374.000(Ft.)
Difference in elevation = 4.000(Ft.)
Slope = 0.00704 s(%)= 0.70
TC = $k(0.706)*[(\text{length}^3)/(\text{elevation change})]^{0.2}$
Initial area time of concentration = 24.044 min.
Rainfall intensity = 3.427(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.881
Subarea runoff = 17.671(CFS)
Total initial stream area = 5.850(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.071(In/Hr)

AREA B

+++++
Process from Point/Station 12.000 to Point/Station 13.000
**** INITIAL AREA EVALUATION ****

UNDEVELOPED (average cover) subarea
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 84.00
Adjusted SCS curve number for AMC 3 = 96.40
Pervious ratio(A_p) = 1.0000 Max loss rate(F_m)= 0.071(In/Hr)
Initial subarea data:
Initial area flow distance = 472.000(Ft.)
Top (of initial area) elevation = 381.200(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 6.200(Ft.)
Slope = 0.01314 s(%)= 1.31
 $TC = k(0.706)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 19.710 min.
Rainfall intensity = 3.861(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.883$
Subarea runoff = 32.612(CFS)
Total initial stream area = 9.560(Ac.)
Pervious area fraction = 1.000
Initial area F_m value = 0.071(In/Hr)
End of computations, Total Study Area = 15.41 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(A_p) = 1.000
Area averaged SCS curve number = 84.0

TRACT NO. 20478

PROPOSED DEVELOPED SITE

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1

Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 10.0

Computed rainfall intensity:

Storm year = 10.00 1 hour rainfall = 0.989 (In.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 1

AREA A

+++++
Process from Point/Station 20.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(A_p) = 0.2500 Max loss rate(F_m) = 0.180(In/Hr)
Initial subarea data:
Initial area flow distance = 684.000(Ft.)
Top (of initial area) elevation = 381.500(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 4.900(Ft.)
Slope = 0.00716 s(%) = 0.72
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 12.284 min.
Rainfall intensity = 2.561(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.837$
Subarea runoff = 4.393(CFS)
Total initial stream area = 2.050(Ac.)
Pervious area fraction = 0.250
Initial area F_m value = 0.180(In/Hr)

CONFLUENCE NO. 1 OF 3

+++++
Process from Point/Station 20.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.050(Ac.)

Runoff from this stream = 4.393(CFS)

Time of concentration = 12.28 min.

Rainfall intensity = 2.561(In/Hr)

Area averaged loss rate (Fm) = 0.1802(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA D

+++++
Process from Point/Station 30.000 to Point/Station 35.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

SCS curve number for soil(AMC 2) = 75.00

Adjusted SCS curve number for AMC 1 = 57.00

Pervious ratio(A_p) = 0.1000 Max loss rate(F_m)= 0.072(In/Hr)

Initial subarea data:

Initial area flow distance = 350.000(Ft.)

Top (of initial area) elevation = 379.100(Ft.)

Bottom (of initial area) elevation = 377.600(Ft.)

Difference in elevation = 1.500(Ft.)

Slope = 0.00429 s(%)= 0.43

$TC = k(0.304)^*[(length^3)/(elevation\ change)]^{0.2}$

Initial area time of concentration = 9.421 min.

Rainfall intensity = 3.004(In/Hr) for a 10.0 year storm

Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.878$

Subarea runoff = 2.559(CFS)

Total initial stream area = 0.970(Ac.)

Pervious area fraction = 0.100

Initial area F_m value = 0.072(In/Hr)

AREA C

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****

Top of street segment elevation = 377.600(Ft.)
End of street segment elevation = 376.600(Ft.)
Length of street segment = 463.000(Ft.)
Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 20.000(Ft.)
Distance from crown to crossfall grade break = 18.000(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line = 12.000(Ft.)
Slope from curb to property line (v/hz) = 0.025
Gutter width = 2.000(Ft.)
Gutter hike from flowline = 2.000(In.)
Manning's N in gutter = 0.0150
Manning's N from gutter to grade break = 0.0150
Manning's N from grade break to crown = 0.0150
Estimated mean flow rate at midpoint of street = 3.310(CFS)
Depth of flow = 0.357(Ft.), Average velocity = 1.135(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width = 11.537(Ft.)
Flow velocity = 1.14(Ft/s)
Travel time = 6.80 min. TC = 16.22 min.
Adding area flow to street
MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm) = 0.180(In/Hr)
Rainfall intensity = 2.168(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.845
Subarea runoff = 1.382(CFS) for 1.180(Ac.)
Total runoff = 3.941(CFS)
Effective area this stream = 2.15(Ac.)
Total Study Area (Main Stream No. 1) = 4.20(Ac.)
Area averaged Fm value = 0.131(In/Hr)
Street flow at end of street = 3.941(CFS)
Half street flow at end of street = 1.971(CFS)
Depth of flow = 0.375(Ft.), Average velocity = 1.183(Ft/s)
Flow width (from curb towards crown) = 12.406(Ft.)

CONFLUENCE NO. 2 OF 3

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 2.150(Ac.)

Runoff from this stream = 3.941(CFS)

Time of concentration = 16.22 min.

Rainfall intensity = 2.168(In/Hr)

Area averaged loss rate (Fm) = 0.1314(In/Hr)

Area averaged Pervious ratio (Ap) = 0.1823

AREA B

+++++
Process from Point/Station 40.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(A_p) = 0.2500 Max loss rate(F_m) = 0.180(In/Hr)
Initial subarea data:
Initial area flow distance = 427.000(Ft.)
Top (of initial area) elevation = 378.600(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00468 s(%) = 0.47
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 11.076 min.
Rainfall intensity = 2.726(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.841$
Subarea runoff = 2.726(CFS)
Total initial stream area = 1.190(Ac.)
Pervious area fraction = 0.250
Initial area F_m value = 0.180(In/Hr)

CONFLUENCE NO. 3 OF 3

 Process from Point/Station 40.000 to Point/Station 25.000
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 3
 Stream flow area = 1.190(Ac.)
 Runoff from this stream = 2.726(CFS)
 Time of concentration = 11.08 min.
 Rainfall intensity = 2.726(In/Hr)
 Area averaged loss rate (Fm) = 0.1802(In/Hr)
 Area averaged Pervious ratio (Ap) = 0.2500
 Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	4.39	2.050	12.28	0.180	2.561
2	3.94	2.150	16.22	0.131	2.168
3	2.73	1.190	11.08	0.180	2.726

Qmax(1) =
 1.000 * 1.000 * 4.393) +
 1.193 * 0.757 * 3.941) +
 0.936 * 1.000 * 2.726) + = 10.505

Qmax(2) =
 0.835 * 1.000 * 4.393) +
 1.000 * 1.000 * 3.941) +
 0.781 * 1.000 * 2.726) + = 9.738

Qmax(3) =
 1.069 * 0.902 * 4.393) +
 1.274 * 0.683 * 3.941) +
 1.000 * 1.000 * 2.726) + = 10.389

Total of 3 streams to confluence:

Flow rates before confluence point:

4.393 3.941 2.726

Maximum flow rates at confluence using above data:

10.505 9.738 10.389

Area of streams before confluence:

2.050 2.150 1.190

Effective area values after confluence:

4.869 5.390 4.507

Results of confluence:

Total flow rate = 10.505(CFS)

Time of concentration = 12.284 min.

Effective stream area after confluence = 4.869(Ac.)

Study area average Pervious fraction(Ap) = 0.223

Study area average soil loss rate(Fm) = 0.161(In/Hr)

Study area total (this main stream) = 5.39(Ac.)

AREA E

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(A_p) = 0.2500 Max loss rate(F_m)= 0.180(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 381.600(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 6.600(Ft.)
Slope = 0.00660 s(%)= 0.66
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 14.536 min.
Rainfall intensity = 2.315(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.830$
Subarea runoff = 5.054(CFS)
Total initial stream area = 2.630(Ac.)
Pervious area fraction = 0.250
Initial area F_m value = 0.180(In/Hr)

CONFLUENCE NO. 1 OF 2

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.630(Ac.)

Runoff from this stream = 5.054(CFS)

Time of concentration = 14.54 min.

Rainfall intensity = 2.315(In/Hr)

Area averaged loss rate (Fm) = 0.1802(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA F

+++++
Process from Point/Station 60.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(A_p) = 0.2500 Max loss rate(F_m) = 0.180(In/Hr)
Initial subarea data:
Initial area flow distance = 867.000(Ft.)
Top (of initial area) elevation = 380.800(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 5.800(Ft.)
Slope = 0.00669 s(%) = 0.67
 $TC = k(0.336)^*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 13.692 min.
Rainfall intensity = 2.400(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area ($Q=KCI A$) is $C = 0.832$
Subarea runoff = 3.476(CFS)
Total initial stream area = 1.740(Ac.)
Pervious area fraction = 0.250
Initial area F_m value = 0.180(In/Hr)

AREA G

+++++
Process from Point/Station 65.000 to Point/Station 55.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 1 = 57.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.180(In/Hr)
Time of concentration = 13.69 min.
Rainfall intensity = 2.400(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.832
Subarea runoff = 8.391(CFS) for 4.200(Ac.)
Total runoff = 11.867(CFS)
Effective area this stream = 5.94(Ac.)
Total Study Area (Main Stream No. 1) = 13.96(Ac.)
Area averaged Fm value = 0.180(In/Hr)

CONFLUENCE NO. 2 OF 2

+++++
Process from Point/Station 65.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 5.940(Ac.)
Runoff from this stream = 11.867(CFS)
Time of concentration = 13.69 min.
Rainfall intensity = 2.400(In/Hr)
Area averaged loss rate (Fm) = 0.1802(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2500
Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	5.05	2.630	14.54	0.180	2.315
2	11.87	5.940	13.69	0.180	2.400

Qmax(1) =
1.000 * 1.000 * 5.054) +
0.962 * 1.000 * 11.867) + = 16.469

Qmax(2) =
1.040 * 0.942 * 5.054) +
1.000 * 1.000 * 11.867) + = 16.817

Total of 2 streams to confluence:

Flow rates before confluence point:

5.054 11.867

Maximum flow rates at confluence using above data:

16.469 16.817

Area of streams before confluence:

2.630 5.940

Effective area values after confluence:

8.570 8.417

Results of confluence:

Total flow rate = 16.817(CFS)

Time of concentration = 13.692 min.

Effective stream area after confluence = 8.417(Ac.)

Study area average Pervious fraction(Ap) = 0.250

Study area average soil loss rate(Fm) = 0.180(In/Hr)

Study area total (this main stream) = 8.57(Ac.)

End of computations, Total Study Area = 13.96 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Note: These figures do not consider reduced effective area effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.240

Area averaged SCS curve number = 75.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 25.0

Computed rainfall intensity:

Storm year = 25.00 1 hour rainfall = 1.350 (In.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 2

AREA A

Process from Point/Station 20.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.113(In/Hr)
Initial subarea data:
Initial area flow distance = 684.000(Ft.)
Top (of initial area) elevation = 381.500(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 4.900(Ft.)
Slope = 0.00716 s(%)= 0.72
TC = $k(0.336)*[(\text{length}^3)/(\text{elevation change})]^{0.2}$
Initial area time of concentration = 12.284 min.
Rainfall intensity = 3.496(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.871
Subarea runoff = 6.242(CFS)
Total initial stream area = 2.050(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.113(In/Hr)

CONFLUENCE NO. 1 OF 3

+++++
Process from Point/Station 20.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.050(Ac.)

Runoff from this stream = 6.242(CFS)

Time of concentration = 12.28 min.

Rainfall intensity = 3.496(In/Hr)

Area averaged loss rate (Fm) = 0.1132(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA D

+++++
Process from Point/Station 30.000 to Point/Station 35.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

SCS curve number for soil(AMC 2) = 75.00

Pervious ratio(A_p) = 0.1000 Max loss rate(F_m) = 0.045(In/Hr)

Initial subarea data:

Initial area flow distance = 350.000(Ft.)

Top (of initial area) elevation = 379.100(Ft.)

Bottom (of initial area) elevation = 377.600(Ft.)

Difference in elevation = 1.500(Ft.)

Slope = 0.00429 s(%) = 0.43

$TC = k(0.304)^*[(length^3)/(elevation\ change)]^{0.2}$

Initial area time of concentration = 9.421 min.

Rainfall intensity = 4.100(In/Hr) for a 25.0 year storm

Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.890$

Subarea runoff = 3.540(CFS)

Total initial stream area = 0.970(Ac.)

Pervious area fraction = 0.100

Initial area F_m value = 0.045(In/Hr)

AREA C

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****

Top of street segment elevation = 377.600(Ft.)
End of street segment elevation = 376.600(Ft.)
Length of street segment = 463.000(Ft.)
Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 20.000(Ft.)
Distance from crown to crossfall grade break = 18.000(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line = 12.000(Ft.)
Slope from curb to property line (v/hz) = 0.025
Gutter width = 2.000(Ft.)
Gutter hike from flowline = 2.000(In.)
Manning's N in gutter = 0.0150
Manning's N from gutter to grade break = 0.0150
Manning's N from grade break to crown = 0.0150
Estimated mean flow rate at midpoint of street = 4.686(CFS)
Depth of flow = 0.393(Ft.), Average velocity = 1.233(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width = 13.320(Ft.)
Flow velocity = 1.23(Ft/s)
Travel time = 6.26 min. TC = 15.68 min.
Adding area flow to street
MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.113(In/Hr)
Rainfall intensity = 3.020(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.875
Subarea runoff = 2.144(CFS) for 1.180(Ac.)
Total runoff = 5.684(CFS)
Effective area this stream = 2.15(Ac.)
Total Study Area (Main Stream No. 1) = 4.20(Ac.)
Area averaged Fm value = 0.083(In/Hr)
Street flow at end of street = 5.684(CFS)
Half street flow at end of street = 2.842(CFS)
Depth of flow = 0.415(Ft.), Average velocity = 1.291(Ft/s)
Flow width (from curb towards crown)= 14.404(Ft.)

CONFLUENCE NO. 2 OF 3

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 2.150(Ac.)

Runoff from this stream = 5.684(CFS)

Time of concentration = 15.68 min.

Rainfall intensity = 3.020(In/Hr)

Area averaged loss rate (Fm) = 0.0826(In/Hr)

Area averaged Pervious ratio (Ap) = 0.1823

AREA B

+++++
Process from Point/Station 40.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(A_p) = 0.2500 Max loss rate(F_m)= 0.113(In/Hr)
Initial subarea data:
Initial area flow distance = 427.000(Ft.)
Top (of initial area) elevation = 378.600(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00468 s(%)= 0.47
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 11.076 min.
Rainfall intensity = 3.720(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area ($Q=KCIA$) is $C = 0.873$
Subarea runoff = 3.863(CFS)
Total initial stream area = 1.190(Ac.)
Pervious area fraction = 0.250
Initial area F_m value = 0.113(In/Hr)

CONFLUENCE NO. 3 OF 3

+++++
Process from Point/Station 40.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 3

Stream flow area = 1.190(Ac.)
Runoff from this stream = 3.863(CFS)
Time of concentration = 11.08 min.
Rainfall intensity = 3.720(In/Hr)
Area averaged loss rate (Fm) = 0.1132(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2500
Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	6.24	2.050	12.28	0.113	3.496
2	5.68	2.150	15.68	0.083	3.020
3	3.86	1.190	11.08	0.113	3.720

Qmax(1) =
1.000 * 1.000 * 6.242) +
1.162 * 0.783 * 5.684) +
0.938 * 1.000 * 3.863) + = 15.040

Qmax(2) =
0.859 * 1.000 * 6.242) +
1.000 * 1.000 * 5.684) +
0.806 * 1.000 * 3.863) + = 14.160

Qmax(3) =
1.066 * 0.902 * 6.242) +
1.238 * 0.706 * 5.684) +
1.000 * 1.000 * 3.863) + = 14.836

Total of 3 streams to confluence:

Flow rates before confluence point:

6.242 5.684 3.863

Maximum flow rates at confluence using above data:

15.040 14.160 14.836

Area of streams before confluence:

2.050 2.150 1.190

Effective area values after confluence:

4.924 5.390 4.557

Results of confluence:

Total flow rate = 15.040(CFS)

Time of concentration = 12.284 min.

Effective stream area after confluence = 4.924(Ac.)

Study area average Pervious fraction(Ap) = 0.223

Study area average soil loss rate(Fm) = 0.101(In/Hr)

Study area total (this main stream) = 5.39(Ac.)

AREA E

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.113(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 381.600(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 6.600(Ft.)
Slope = 0.00660 s(%)= 0.66
TC = $k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 14.536 min.
Rainfall intensity = 3.161(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.868
Subarea runoff = 7.213(CFS)
Total initial stream area = 2.630(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.113(In/Hr)

CONFLUENCE NO. 1 OF 2

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.630(Ac.)

Runoff from this stream = 7.213(CFS)

Time of concentration = 14.54 min.

Rainfall intensity = 3.161(In/Hr)

Area averaged loss rate (Fm) = 0.1132(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA F

Process from Point/Station 60.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.113(In/Hr)
Initial subarea data:
Initial area flow distance = 867.000(Ft.)
Top (of initial area) elevation = 380.800(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 5.800(Ft.)
Slope = 0.00669 s(%)= 0.67
TC = $k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 13.692 min.
Rainfall intensity = 3.276(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.869
Subarea runoff = 4.953(CFS)
Total initial stream area = 1.740(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.113(In/Hr)

AREA G

+++++
Process from Point/Station 65.000 to Point/Station 55.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.113(In/Hr)
Time of concentration = 13.69 min.
Rainfall intensity = 3.276(In/Hr) for a 25.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.869
Subarea runoff = 11.955(CFS) for 4.200(Ac.)
Total runoff = 16.908(CFS)
Effective area this stream = 5.94(Ac.)
Total Study Area (Main Stream No. 1) = 13.96(Ac.)
Area averaged Fm value = 0.113(In/Hr)

CONFLUENCE NO. 2 OF 2

+++++
Process from Point/Station 65.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 5.940(Ac.)
Runoff from this stream = 16.908(CFS)
Time of concentration = 13.69 min.
Rainfall intensity = 3.276(In/Hr)
Area averaged loss rate (Fm) = 0.1132(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2500
Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	7.21	2.630	14.54	0.113	3.161
2	16.91	5.940	13.69	0.113	3.276

Qmax(1) =
1.000 * 1.000 * 7.213) +
0.964 * 1.000 * 16.908) + = 23.504

Qmax(2) =
1.038 * 0.942 * 7.213) +
1.000 * 1.000 * 16.908) + = 23.960

Total of 2 streams to confluence:

Flow rates before confluence point:

7.213 16.908

Maximum flow rates at confluence using above data:

23.504 23.960

Area of streams before confluence:

2.630 5.940

Effective area values after confluence:

8.570 8.417

Results of confluence:

Total flow rate = 23.960(CFS)

Time of concentration = 13.692 min.

Effective stream area after confluence = 8.417(Ac.)

Study area average Pervious fraction(Ap) = 0.250

Study area average soil loss rate(Fm) = 0.113(In/Hr)

Study area total (this main stream) = 8.57(Ac.)

End of computations, Total Study Area = 13.96 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Note: These figures do not consider reduced effective area effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.240

Area averaged SCS curve number = 75.0

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005 Version 7.1
Rational Hydrology Study Date: 12/16/21

Program License Serial Number 6058

***** Hydrology Study Control Information *****

Rational hydrology study storm event year is 100.0

Computed rainfall intensity:

Storm year = 100.00 1 hour rainfall = 1.980 (in.)

Slope used for rainfall intensity curve b = 0.6000

Soil antecedent moisture condition (AMC) = 3

AREA A

+++++
Process from Point/Station 20.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Initial subarea data:
Initial area flow distance = 684.000(Ft.)
Top (of initial area) elevation = 381.500(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 4.900(Ft.)
Slope = 0.00716 s(%)= 0.72
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 12.284 min.
Rainfall intensity = 5.128(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCI/A) is C = 0.892
Subarea runoff = 9.381(CFS)
Total initial stream area = 2.050(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.043(In/Hr)

CONFLUENCE NO. 1 OF 3

+++++
Process from Point/Station 20.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.050(Ac.)

Runoff from this stream = 9.381(CFS)

Time of concentration = 12.28 min.

Rainfall intensity = 5.128(In/Hr)

Area averaged loss rate (Fm) = 0.0434(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA D

+++++
Process from Point/Station 30.000 to Point/Station 35.000
**** INITIAL AREA EVALUATION ****

COMMERCIAL subarea type

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 0.000

Decimal fraction soil group D = 1.000

SCS curve number for soil(AMC 2) = 75.00

Adjusted SCS curve number for AMC 3 = 91.00

Pervious ratio(Ap) = 0.1000 Max loss rate(Fm)= 0.017(In/Hr)

Initial subarea data:

Initial area flow distance = 350.000(Ft.)

Top (of initial area) elevation = 379.100(Ft.)

Bottom (of initial area) elevation = 377.600(Ft.)

Difference in elevation = 1.500(Ft.)

Slope = 0.00429 s(%)= 0.43

TC = $k(0.304)*[(\text{length}^3)/(\text{elevation change})]^{0.2}$

Initial area time of concentration = 9.421 min.

Rainfall intensity = 6.013(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KClA) is C = 0.897

Subarea runoff = 5.234(CFS)

Total initial stream area = 0.970(Ac.)

Pervious area fraction = 0.100

Initial area Fm value = 0.017(In/Hr)

AREA C

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****

Top of street segment elevation = 377.600(Ft.)
End of street segment elevation = 376.600(Ft.)
Length of street segment = 463.000(Ft.)
Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 20.000(Ft.)
Distance from crown to crossfall grade break = 18.000(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line = 12.000(Ft.)
Slope from curb to property line (v/hz) = 0.025
Gutter width = 2.000(Ft.)
Gutter hike from flowline = 2.000(In.)
Manning's N in gutter = 0.0150
Manning's N from gutter to grade break = 0.0150
Manning's N from grade break to crown = 0.0150
Estimated mean flow rate at midpoint of street = 7.071(CFS)
Depth of flow = 0.441(Ft.), Average velocity = 1.361(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width = 15.721(Ft.)
Flow velocity = 1.36(Ft/s)
Travel time = 5.67 min. TC = 15.09 min.
Adding area flow to street
MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Rainfall intensity = 4.532(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.894
Subarea runoff = 3.474(CFS) for 1.180(Ac.)
Total runoff = 8.708(CFS)
Effective area this stream = 2.15(Ac.)
Total Study Area (Main Stream No. 1) = 4.20(Ac.)
Area averaged Fm value = 0.032(In/Hr)
Street flow at end of street = 8.708(CFS)
Half street flow at end of street = 4.354(CFS)
Depth of flow = 0.468(Ft.), Average velocity = 1.431(Ft/s)
Flow width (from curb towards crown)= 17.075(Ft.)

CONFLUENCE NO. 2 OF 3

+++++
Process from Point/Station 35.000 to Point/Station 25.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 2.150(Ac.)

Runoff from this stream = 8.708(CFS)

Time of concentration = 15.09 min.

Rainfall intensity = 4.532(In/Hr)

Area averaged loss rate (Fm) = 0.0317(In/Hr)

Area averaged Pervious ratio (Ap) = 0.1823

AREA B

+++++
Process from Point/Station 40.000 to Point/Station 25.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Initial subarea data:
Initial area flow distance = 427.000(Ft.)
Top (of initial area) elevation = 378.600(Ft.)
Bottom (of initial area) elevation = 376.600(Ft.)
Difference in elevation = 2.000(Ft.)
Slope = 0.00468 s(%)= 0.47
TC = $k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 11.076 min.
Rainfall intensity = 5.457(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.893
Subarea runoff = 5.797(CFS)
Total initial stream area = 1.190(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.043(In/Hr)

CONFLUENCE NO. 3 OF 3

+++++
 Process from Point/Station 40.000 to Point/Station 25.000
 **** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 3

Stream flow area = 1.190(Ac.)
 Runoff from this stream = 5.797(CFS)
 Time of concentration = 11.08 min.
 Rainfall intensity = 5.457(In/Hr)
 Area averaged loss rate (Fm) = 0.0434(In/Hr)
 Area averaged Pervious ratio (Ap) = 0.2500
 Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	9.38	2.050	12.28	0.043	5.128
2	8.71	2.150	15.09	0.032	4.532
3	5.80	1.190	11.08	0.043	5.457

Qmax(1) =
 1.000 * 1.000 * 9.381) +
 1.132 * 0.814 * 8.708) +
 0.939 * 1.000 * 5.797) + = 22.853

Qmax(2) =
 0.883 * 1.000 * 9.381) +
 1.000 * 1.000 * 8.708) +
 0.829 * 1.000 * 5.797) + = 21.797

Qmax(3) =
 1.065 * 0.902 * 9.381) +
 1.205 * 0.734 * 8.708) +
 1.000 * 1.000 * 5.797) + = 22.507

Total of 3 streams to confluence:

Flow rates before confluence point:
 9.381 8.708 5.797

Maximum flow rates at confluence using above data:
 22.853 21.797 22.507

Area of streams before confluence:
 2.050 2.150 1.190

Effective area values after confluence:
 4.990 5.390 4.616

Results of confluence:

Total flow rate = 22.853(CFS)

Time of concentration = 12.284 min.
 Effective stream area after confluence = 4.990(Ac.)
 Study area average Pervious fraction(Ap) = 0.223
 Study area average soil loss rate(Fm) = 0.039(In/Hr)
 Study area total (this main stream) = 5.39(Ac.)

AREA E

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Initial subarea data:
Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 381.600(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 6.600(Ft.)
Slope = 0.00660 s(%)= 0.66
 $TC = k(0.336)*[(length^3)/(elevation\ change)]^{0.2}$
Initial area time of concentration = 14.536 min.
Rainfall intensity = 4.636(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KClA) is C = 0.892
Subarea runoff = 10.869(CFS)
Total initial stream area = 2.630(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.043(In/Hr)

CONFLUENCE NO. 1 OF 2

+++++
Process from Point/Station 50.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 2.630(Ac.)

Runoff from this stream = 10.869(CFS)

Time of concentration = 14.54 min.

Rainfall intensity = 4.636(In/Hr)

Area averaged loss rate (Fm) = 0.0434(In/Hr)

Area averaged Pervious ratio (Ap) = 0.2500

AREA F

+++++
Process from Point/Station 60.000 to Point/Station 55.000
**** INITIAL AREA EVALUATION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Initial subarea data:
Initial area flow distance = 867.000(Ft.)
Top (of initial area) elevation = 380.800(Ft.)
Bottom (of initial area) elevation = 375.000(Ft.)
Difference in elevation = 5.800(Ft.)
Slope = 0.00669 s(%)= 0.67
TC = $k(0.336)*[(\text{length}^3)/(\text{elevation change})]^{0.2}$
Initial area time of concentration = 13.692 min.
Rainfall intensity = 4.805(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.892
Subarea runoff = 7.456(CFS)
Total initial stream area = 1.740(Ac.)
Pervious area fraction = 0.250
Initial area Fm value = 0.043(In/Hr)

AREA G

+++++
Process from Point/Station 65.000 to Point/Station 55.000
**** SUBAREA FLOW ADDITION ****

MOBILE HOME PARK subarea type
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
SCS curve number for soil(AMC 2) = 75.00
Adjusted SCS curve number for AMC 3 = 91.00
Pervious ratio(Ap) = 0.2500 Max loss rate(Fm)= 0.043(In/Hr)
Time of concentration = 13.69 min.
Rainfall intensity = 4.805(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.892
Subarea runoff = 17.998(CFS) for 4.200(Ac.)
Total runoff = 25.454(CFS)
Effective area this stream = 5.94(Ac.)
Total Study Area (Main Stream No. 1) = 13.96(Ac.)
Area averaged Fm value = 0.043(In/Hr)

CONFLUENCE NO. 2 OF 2

Process from Point/Station 65.000 to Point/Station 55.000
**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 5.940(Ac.)
Runoff from this stream = 25.454(CFS)
Time of concentration = 13.69 min.
Rainfall intensity = 4.805(In/Hr)
Area averaged loss rate (Fm) = 0.0434(In/Hr)
Area averaged Pervious ratio (Ap) = 0.2500
Summary of stream data:

Stream No.	Flow rate (CFS)	Area (Ac.)	TC (min)	Fm (In/Hr)	Rainfall Intensity (In/Hr)
------------	-----------------	------------	----------	------------	----------------------------

1	10.87	2.630	14.54	0.043	4.636
2	25.45	5.940	13.69	0.043	4.805

Qmax(1) =
1.000 * 1.000 * 10.869) +
0.964 * 1.000 * 25.454) + = 35.419

Qmax(2) =
1.037 * 0.942 * 10.869) +
1.000 * 1.000 * 25.454) + = 36.070

Total of 2 streams to confluence:

Flow rates before confluence point:

10.869 25.454

Maximum flow rates at confluence using above data:

35.419 36.070

Area of streams before confluence:

2.630 5.940

Effective area values after confluence:

8.570 8.417

Results of confluence:

Total flow rate = 36.070(CFS)

Time of concentration = 13.692 min.

Effective stream area after confluence = 8.417(Ac.)

Study area average Pervious fraction(Ap) = 0.250

Study area average soil loss rate(Fm) = 0.043(In/Hr)

Study area total (this main stream) = 8.57(Ac.)

End of computations, Total Study Area = 13.96 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

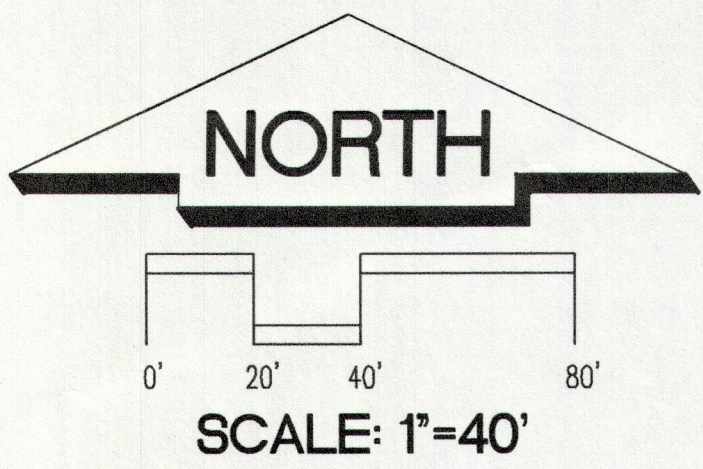
Note: These figures do not consider reduced effective area effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.240

Area averaged SCS curve number = 75.0

19 20
30 29

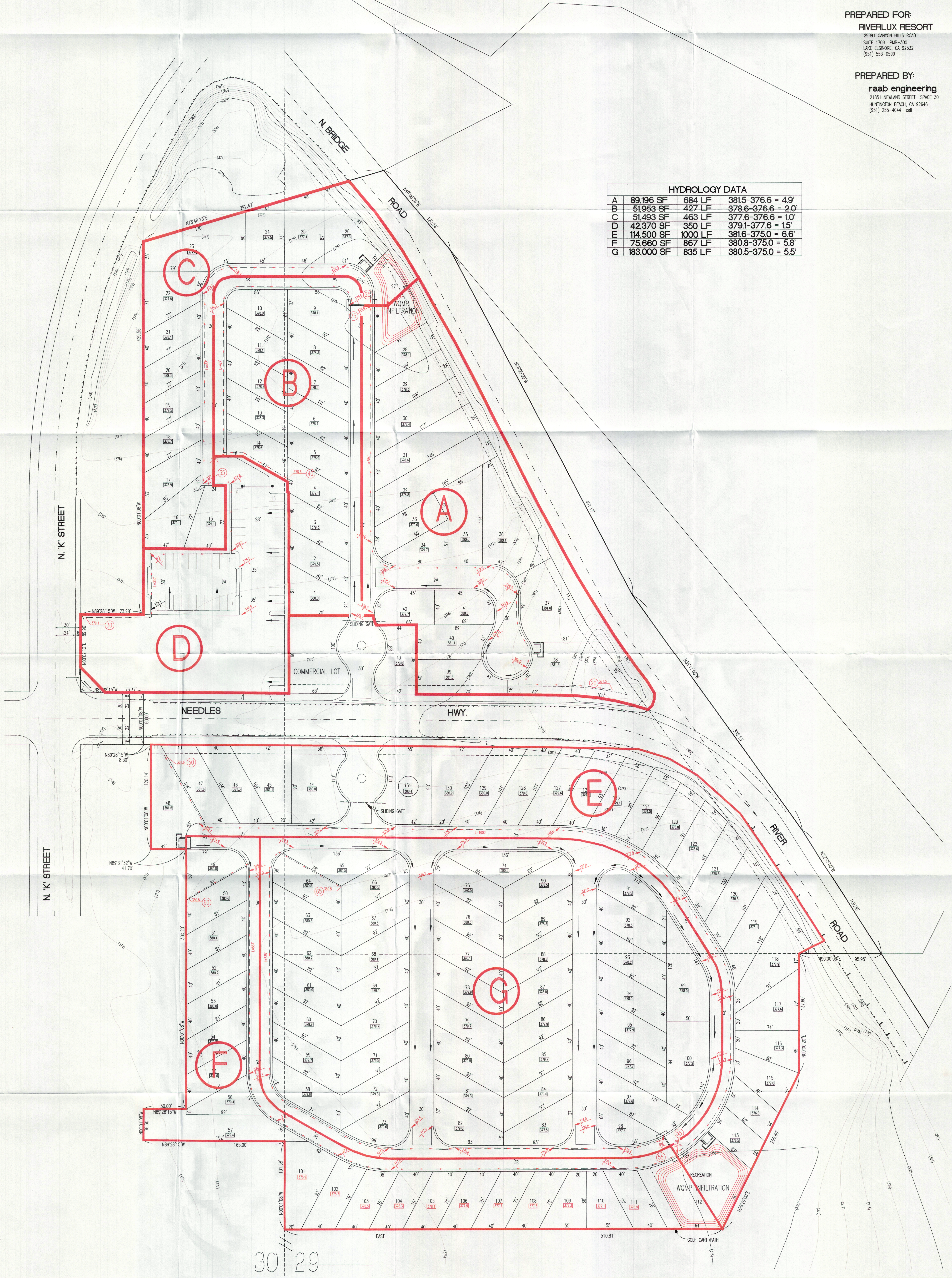
HYDROLOGY MAP
TRACT NO. 20478
DEVELOPED SITE CONDITIONS



PREPARED FOR:
RIVERLUX RESORT
29991 CANYON HILLS ROAD
SUITE 1709 PMB-300
LAKE ELSINORE, CA 92532
(951) 553-0599

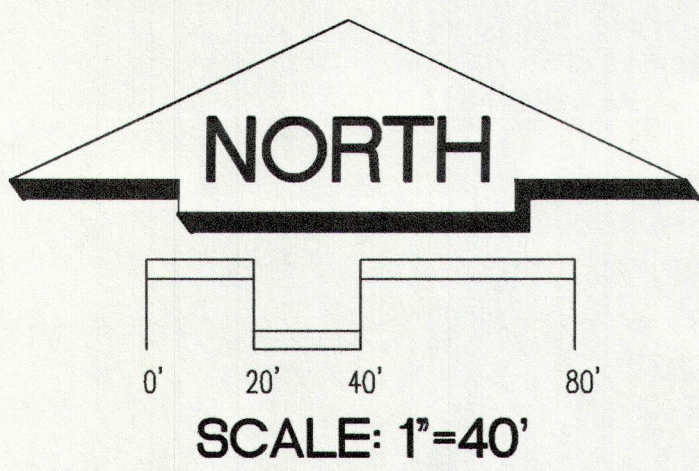
PREPARED BY:
raab engineering
21851 NEWLAND STREET SPACE 30
HUNTINGTON BEACH, CA 92646
(951) 255-4044 cell

HYDROLOGY DATA			
A	89,196 SF	684 LF	381.5-376.6 = 4.9'
B	51,953 SF	427 LF	378.6-376.6 = 2.0'
C	51,493 SF	463 LF	377.6-376.6 = 1.0'
D	42,370 SF	350 LF	379.1-377.6 = 1.5'
E	114,500 SF	1000 LF	381.6-375.0 = 6.6'
F	75,660 SF	867 LF	380.8-375.0 = 5.8'
G	183,000 SF	835 LF	380.5-375.0 = 5.5'



19 20
30 29

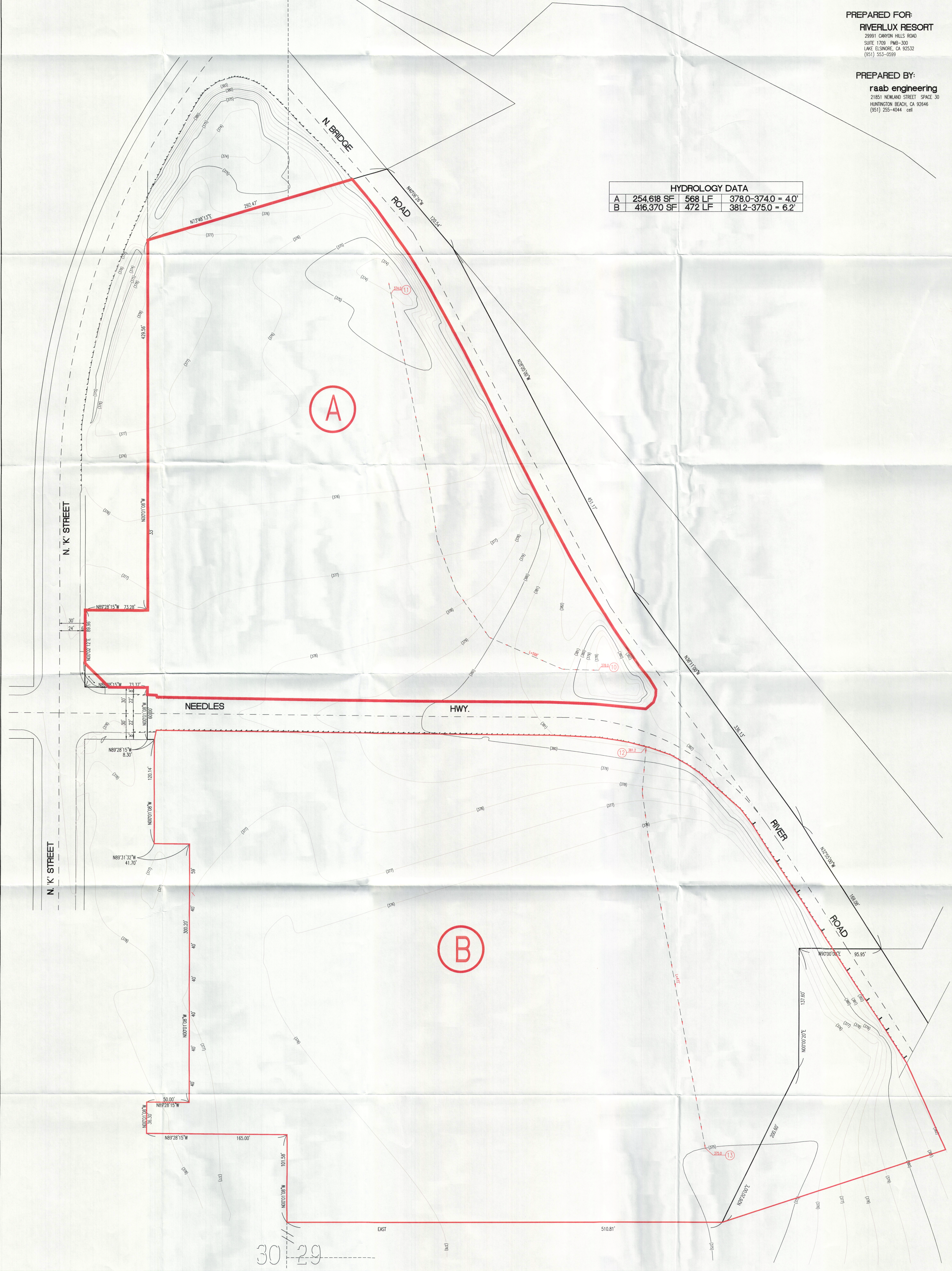
HYDROLOGY MAP
TRACT NO. 20478
EXISTING FLOW CONDITIONS



PREPARED FOR:
RIVERLUX RESORT
29991 CANYON HILLS ROAD
SUITE 1708 PMB-300
LAKE ELSINORE, CA 92532
(951) 553-0599

PREPARED BY:
raab engineering
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(951) 255-4044 cell

HYDROLOGY DATA			
A	254,618 SF	568 LF	378.0-374.0 = 4.0'
B	416,370 SF	472 LF	381.2-375.0 = 6.2'



APPENDIX H

Noise Study

Riverlux Resort

NOISE STUDY REPORT

June 2021

Prepared for:

Riverlux Resort
29991 Canyon Hills Road Suite 1709 PMB-300
Lake Elsinore, CA 92532

*

Prepared by:

Jeff Johnson
Pacific BioScience, Inc.
156 Woodburne
Newport Beach, California 92660



Noise Study Report

for

Riverlux Resort

June 2021

Prepared By:



Date: 2/12/21

Jeff Johnson
Principal Biologist
(805) 750-3474
Pacific BioScience, Inc.



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Newport Beach, CA 92660
www.pacificbioscience.com

Table of Contents

1	EXECUTIVE SUMMARY	2
1.1	Project Description.....	2
1.2	Construction-Related Noise.....	2
1.3	Operational Noise.....	2
1.4	Vibration	2
1.5	Mitigation Measures.....	3
2	INTRODUCTION	6
3	FUNDAMENTALS OF NOISE	7
3.1	Defining Noise	7
3.2	Vibration and Groundborne Noise.....	8
4	EXISTING NOISE ENVIRONMENT.....	9
4.1	Sensitive Receptors	9
4.2	Existing Noise Levels.....	9
5	REGULATORY FRAMEWORK	11
5.1	Federal Regulations	11
5.2	State Regulations.....	14
5.3	Local Regulations	15
6	IMPACT ANALYSIS	16
6.1	Thresholds of Significance	16
6.2	Consistency with Applicable Standards.....	16
6.3	Vibration Impacts	17
7	MITIGATION MEASURES	19
8	REFERENCES.....	20

Appendix

Appendix A Noise Measurement Data

Construction-related and operational noise impacts were modeled and analyzed for the proposed housing development project located along Needles Highway between North K Street and River Road, within the City of Needles, California. This noise impact analysis contains documentation of existing noise levels as well as analysis of the impacts generated by project operation and traffic and analysis of vibration impacts. This report analyzes the project's consistency with applicable federal, State, and local regulations. The results of this report find construction-related and operational noise levels are consistent with applicable regulations.

1.1 *Project Description*

Riverlux Resort is a proposed Townhome/Recreational Vehicle (RV) Community in Needles, CA that will be constructed on 14 acres of land along Needles Highway between North K Street and River Road. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 sq. ft. grocery store and one free standing 20 ft. high digital billboard. The townhouses proposed for construction will consist of 128 single family townhomes which accommodate parking for RV's. There will be three models being constructed within the proposed project area and consist of single-story, two-story, and three-story models. The proposed project will have five phases of construction until project completion. Ground will be leveled at appropriate elevations. See Appendix B: Project Site Plans for the location and layout of the proposed buildings. Buildings constructed onsite will have a maximum height of 35 feet to minimize visual profile. All construction will be completed to the standards of the International Building Code for residential and commercial structures, including the installation of smoke and fire detection alarms. Sufficient parking will be installed around the commercial buildings, including the grocery store which will include 80 parking spaces. Four Americans with Disabilities Act (ADA) parking spots will be designated based on the 2010 ADA Standards for Accessible Design which requires one spot for every twenty-five. Additionally, 5 spots will be dedicated for electric vehicles. The perimeter of the livable townhomes will be lined with 6' concrete block wall. Landscaping is proposed around the block wall and will consist of desert tolerant plants that require minimal maintenance and water and mimic the visual aesthetics of the City of Needles.

1.2 *Construction-Related Noise*

Construction activity could result in noise levels in excess of the allowable noise levels at the residential and commercial uses to the west, north, and east of the proposed project site. With implementation of Mitigation Measure N-1, described herein, no substantial impacts will occur.

1.3 *Operational Noise*

Opening Year Without Project and Opening Year Plus Project traffic noise levels will not exceed allowable noise levels for residential uses along Needles Highway. The proposed project will not result in increases in traffic noise that will cause noise standards to be exceeded. Therefore, no substantial impacts will result. In addition, increases in traffic due to the proposed project will not result in a perceptible noise increase at any of the studied roadway segments. No substantial impacts will occur.

1.4 *Vibration*

Based on the threshold criteria established by the Federal Transit Administration (FTA) and the California Department of Transportation (Caltrans), vibration from use of heavy construction equipment to construct the proposed project would be below the thresholds to cause damage to nearby structures and result in less than *barely perceptible* vibration at studied receptors. No excessive, strongly perceptible vibration will occur.

1.5 Mitigation Measures

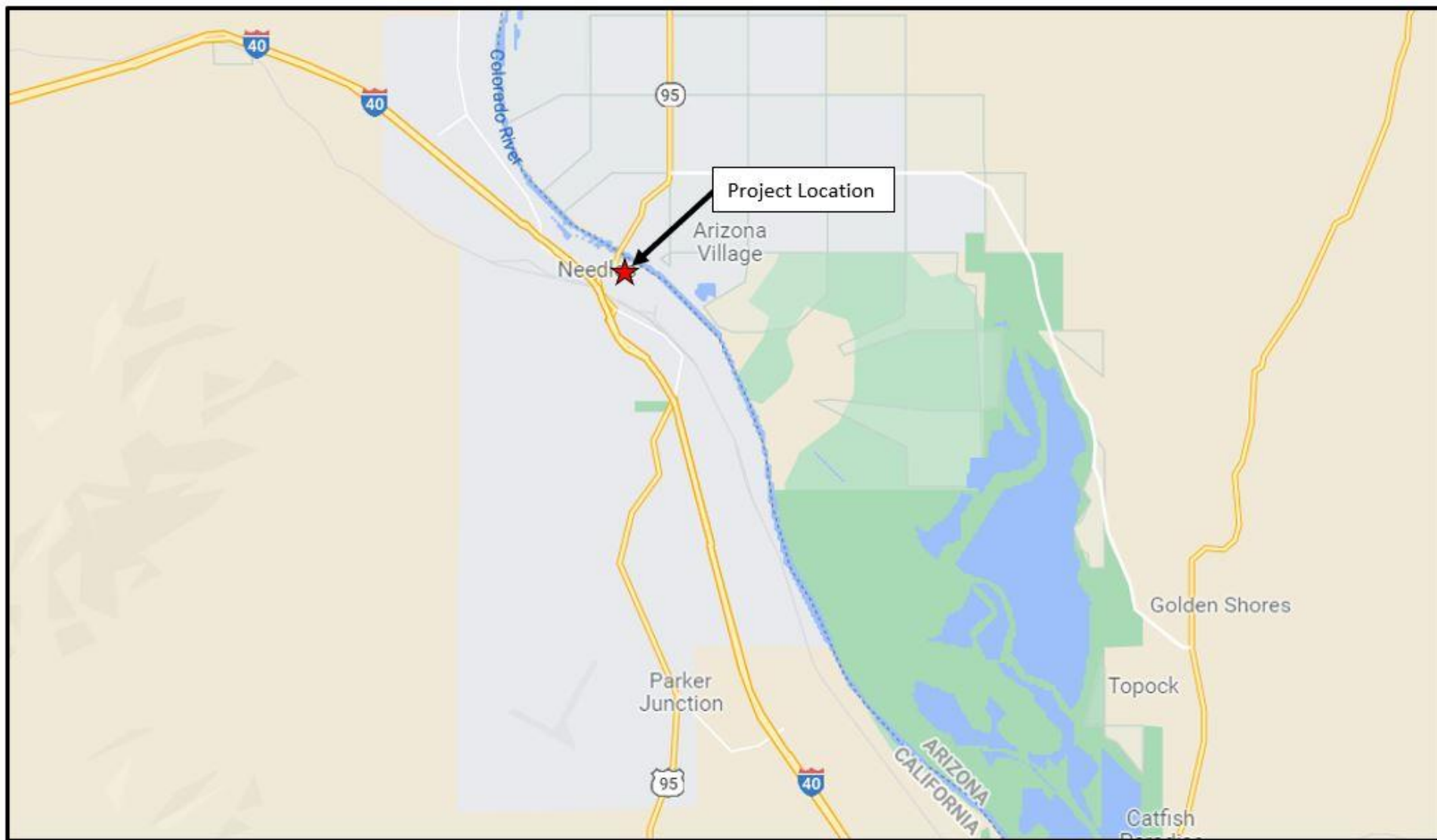
The following mitigation measures are required to ensure that project-related noise levels will not exceed established thresholds and are consistent with applicable federal, State, and local regulations.

Mitigation Measure N-1: The applicant shall acknowledge that the noise generated by residential use of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA Ldn.

Mitigation Measure N-2: The following shall apply to construction noise from tools and equipment:

- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to between the hours of 8: 00 a.m. and 6:00 p.m. Monday through Friday. The applicant is requesting work to be allowed between 8:00 a.m. and 6:00 p.m. on Saturdays.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory- approved muffler systems.

With the implementation of Mitigation Measure N-1 and N-2, construction noise will feasibly be reduced to unsubstantial levels.



0 1 2 3 4 Miles



LEGEND

★ Project Site

FIGURE 1
Project Location



0 50 150 300 600 FEET



LEGEND

- Project Limits
- ★ Project Site

FIGURE 2
Project Limits

2 INTRODUCTION

This report includes modeling and analysis of construction- and operation-related noise generated from the proposed project on surrounding land uses. Vibration effects and airport noise are also discussed herein. This project involves two phases and they are discussed below.

This report has been prepared utilizing project-specific characteristics where available. In those instances where project-specific data is not available, the analysis has been supplemented by model defaults or other standardized sources of comparable data. In any case where non-project defaults or other data have been used, a “worst-case” scenario was developed to ensure a conservative estimate of noise impacts.

This report has been prepared for use by the Lead Agency to assess potential project-related noise impacts to the environment in compliance with federal, State, or local guidelines, particularly with respect to the noise issues identified in Appendix G of the State CEQA Guidelines. This report does not make determinations of significance pursuant to CEQA because such determinations are required to be made solely in the purview of the Lead Agency.

3.1 Defining Noise

“Sound” is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. “Noise” is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment.

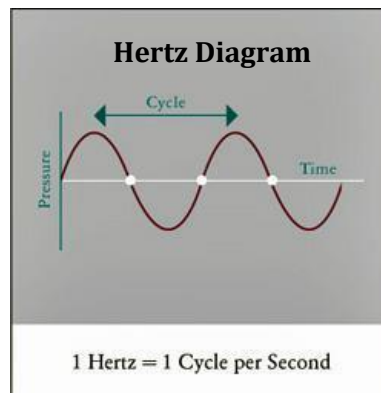
THE PRODUCTION OF SOUND

Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

MEASURING SOUND

Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a five dB change is generally *readily perceptible*.

Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on how humans will respond. While the intensity of the sound is a purely physical quantity, the loudness or human response depends on the characteristics of the human ear. Human hearing is limited not only to the range of audible frequencies but also in the way it perceives the sound pressure level in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hertz (Hz) and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude with less intensity. Hertz is a unit of frequency that defines any periodic event. In the case of sound pressure, a Hertz defines one cycle of a sound wave per second (see Figure 1, Hertz Diagram). To approximate the frequency response of the human ear, a series of sound pressure level adjustments is usually applied to the sound measured by a sound level meter.



STANDARDS FOR NOISE EQUIVALENT

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise have been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:

L_{eq} (Equivalent Energy Noise Level): The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. L_{eq} is typically computed over 1-, 8-, and 24-hour sample periods.

CNEL (Community Noise Equivalent Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 PM to 10:00 PM and after addition of ten decibels to sound levels in the night from 10:00 PM to 7:00 AM.

L_{dn} (Day-Night Average Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00 PM and before 7:00 AM.

CNEL and L_{dn} are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. L_{eq} is better utilized for describing specific and consistent sources because of the shorter reference period.

Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL).

3.2 Vibration and Groundborne Noise

Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

4.1 Sensitive Receptors

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, and residential uses make up the majority of these areas. Specific sensitive receptors within one-quarter mile of the project site include residential uses to the west and north and commercial use to the south. There are no schools located within one-quarter mile of the project site.

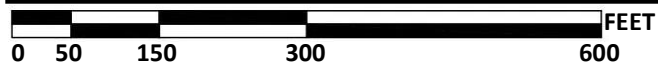
4.2 Existing Noise Levels

Short-term noise measurements at the project site were conducted to identify the ambient noise in the project vicinity. An American National Standards Institute (ANSI Section S14 1979, Type 1) Larson Davis model SoundTrack LxT sound level meter was used to monitor existing ambient noise levels in the project area. The noise meter was programmed in “slow” mode to record noise levels in A-weighted form. The microphone height was set at five feet. Six daytime noise measurements were taken on January 26th, 2021 and five noise measurements were taken on February 2nd, 2021.

Ambient noise levels are a composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location. The measurement location is shown in Figure 3 (Noise Measurement Location). The ambient noise level is presented in Table 1 (Ambient Noise Levels) and measurement output data is included as Appendix A.

Table 1: Ambient Noise Levels

Date	Time Period	Measurement Period	(Sound Meter #)/Description	Existing Ambient Noise Levels		
				Leq	Lmax	Lmin
1/26/2021	2:43 PM - 3:16 PM	33 Minutes	(1) Outside project boundary to the north at intersection of Smokestack Rd and North K St	54.7	69.3	42.9
1/26/2021	3:45 PM - 4:00 PM	15 Minutes	(2) Outside project boundary to the north west adjacent to North K St and Smokestack Rd	53.3	53.9	53.6
1/26/2021	5:16 PM - 5:31 PM	15 Minutes	(3) Center of north end of project boundary	55.3	72.1	41.1
1/26/2021	5:32 PM - 5:47 PM	15 Minutes	(4) Outside project boundary to the north east, adjacent to River Road	62.5	81.6	44.7
1/26/2021	5:49 PM - 6:16 PM	27 Minutes	(5) Near center of project, adjacent to Needles Hwy	58.2	73.2	43.5
1/26/2021	6:20 PM - 6:35 PM	15 Minutes	(6) Corner of Race and North K St outside project boundary to the west	67.8	78.6	50
2/2/2021	7:15 PM - 7:35 PM	20 Minutes	(7) West end of the center of project boundary near Needles Hwy	59.7	79	44.6
2/2/2021	7:38 PM - 7:58 PM	20 minutes	(8) South west edge of project boundary	62.4	85.5	43.8
2/2/2021	8:01 PM - 8:21 PM	20 minutes	(9) East side outside center of project boundary adjacent to River Road	63.7	80.2	43.4
2/2/2021	8:23 PM - 8:43 PM	20 minutes	(10) Southeast corner of project boundary outside limits adjacent to River Road	63.9	81.9	45.7
2/2/2021	8:46 PM - 9:06 PM	20 minutes	(11) Near center of southern edge of project boundary	53.4	76.6	45.7



Pacific BioScience, Inc.

LEGEND



Project Limits

Sound Meter Locations (Number 1-11)

Figure 3

Noise Measurement Locations

5.1 Federal Regulations

FEDERAL NOISE CONTROL ACT OF 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the L_{dn} should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA L_{dn} (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more localized levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated federal agencies, allowing more individualized control for specific issues by designated federal, State, and local government agencies.

FEDERAL TRANSIT ADMINISTRATION

The Federal Transit Administration (FTA) has developed methodology and significance criteria to evaluate incremental noise impacts from surface transportation modes (i.e., on road motor vehicles and trains) as presented in Transit Noise Impact and Vibration Assessment (FTA Guidelines). These incremental noise impact criteria are based on EPA findings and subsequent studies of annoyance in communities affected by transportation noise. The FTA extended the EPA's five dBA incremental impact criterion to higher ambient levels. As baseline ambient levels increase, smaller and smaller increments are allowed to limit expected increases in community annoyance. For example, in residential areas with a baseline ambient noise level of 50 dBA CNEL, a less-than-five dBA increase in noise levels would produce a minimal increase in community annoyance levels, while at 70 dBA CNEL, only one dBA increase could be accommodated before a significant annoyance increase would occur.

VIBRATION STANDARDS

The FTA provides guidelines for maximum-acceptable vibration criteria for different types of land uses. Groundborne vibration and noise levels associated with various types of construction equipment and activities are summarized in Table 2 (Reference Vibration Source Amplitudes for Construction Equipment). Table 3 (Groundborne Vibration and Noise Impact Criteria) shows the Federal Transit Administration's maximum acceptable vibration standard for human annoyance in residences where people normally sleep is 80 VdB (less than 70 vibration events per day).

Table 2
Reference Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec) at 25 Feet	Approximate Vibration Level (VL) at 25 Feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical)	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
Slurry wall	0.017 in rock	75
Vibratory roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Notes: PPV is the peak particle velocity. Pile driver amplitude varies greatly based on equipment type and size. Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment. 2006.		

Table 3
Groundborne Vibration and Noise Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB)		Groundborne Noise Impact Levels (dBA)	
	Frequent Events ₁	Infrequent Events ₂	Frequent Events ₁	Infrequent Events ₂
Category 1: Buildings where low ambient vibration is essential for interior vibrations	65 VdB ₃	65 VdB ₃	N/A	N/A
Category 2: Residences and buildings where people normally sleep	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use	75 VdB	83 VdB	40 dBA	48 dBA
¹ Frequent Events – more than 70 vibration events per day ² Infrequent Events – fewer than 70 vibration events per day This criterion limit is based on levels that are acceptable for more moderately sensitive equipment such as ³ optical microscopes. Source: United States Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Assessment, 1995				

The FTA and Caltrans have compiled the data from numerous studies related to vibration and have developed standards for human perception and building damage. The FTA's maximum acceptable vibration standard for human annoyance is 78 VdB at nearby vibration-sensitive land uses.⁴ The

Caltrans maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings.

5.2 State Regulations

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive noise levels; measure and identify potentially significant permanent or temporary increase in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

CALIFORNIA NOISE CONTROL ACT OF 1973

Sections 46000-46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

CALIFORNIA NOISE INSULATION STANDARDS (CCR TITLE 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of 45 dBA or below [California's Title 24 Noise Standards, Chap. 2-35].

STATE OF CALIFORNIA GENERAL PLAN GUIDELINES 2003

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of development relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., L_{dn} or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally acceptable" ranges include conditions calling for detailed acoustical study or construction mitigation to reduce interior exposure levels prior to the construction or operation of the building under the listed exposure levels.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or damage structures. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses.

The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in Tables 4 (Vibration Damage Potential Threshold Criteria) and 5 (Vibration Annoyance Potential Threshold Criteria).

Table 4
Vibration Damage Potential Threshold Criteria

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
<i>Source: Caltrans 2013</i>		

Table 5
Vibration Annoyance Potential Threshold Criteria

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.9	0.1
Severely perceptible	2	0.4

5.3 Local Regulations

City of Needles Municipal Code

Noise Control

The following noise standards shall be met where applicable:

In outdoor areas, a community noise equivalent level (CNEL) not exceeding 65 decibels, except that where it is not reasonably possible to achieve this objective, the development shall be designed to provide the lowest noise level reasonably possible within private open areas and/or common usable open areas of at least one hundred (100) square feet per unit, with access to such area available to the residents of each unit.

The thresholds identified in Appendix G of the State CEQA Guidelines, as implemented by the City of Needles, have been utilized to assess the significance of the potential environmental effects of the project.

6.1 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project could result in potentially significant impacts related to noise if it results in:

- A. Exposure of persons or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- B. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- C. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- D. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- E. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.
- F. For a project within a vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

To assess construction impacts, a worst-case construction scenario was modeled using the Federal Highway Administration's Roadway Construction Noise Model (RCNM). RCNM utilizes standard noise emission levels for different types of equipment and includes utilization percentage, impact, and shielding parameters.

To assess Opening Year Plus Project traffic noise levels, vehicle trips associated with surrounding roadways were modeled utilizing the Federal Highway Administration (FHWA) Traffic noise Model (TNM) Version 2.5. Traffic noise levels identified represent conservative potential noise exposure. In reality, noise levels may vary from those represented as the calculations do not assume natural or artificial shielding nor do they assume reflection from existing or proposed structures or topography. Intervening structures or other noise-attenuating obstacles between a roadway and a receptor may reduce roadway noise levels at the receptor.

6.2 Consistency with Applicable Standards

CONSTRUCTION NOISE LEVELS

Construction noise levels were estimated for nearby receptors using the FHWA Roadway Construction Noise Model (RCNM). See Figure 4 below for receptor locations. The model indicates that the use of construction equipment such as excavators and graders could expose the residential uses located around the project site to worst case noise levels of 91.0 dBA L_{max} . Table 6 (Construction Noise Impacts) below summarizes the maximum noise levels at each of the studied receivers. Pursuant to the Needles Municipal Code, a noise level of 65 dBA is allowable for residential land uses. Although construction noise would be higher than the ambient noise in the project vicinity, construction noise is naturally short-term and would cease to occur once project construction is complete and is therefore considered a less than significant impact with implementation of Mitigation Measures N-1. Mitigation Measure N-1 has been incorporated to minimize general construction noise impacts to residential and highway commercial uses to the north, south, and west.

Table 6
Construction Noise Impacts

Receptor	Grading/Construction (dBA L _{max})	Noise Threshold Levels (dBA)
1 – Residential	85.0	65.0
2 – Commercial	85.0	70.0
3 – Residential	91.0	65.0
4 – Residential	85.0	65.0
5 – Residential	76.7	65.0
6 – Commercial	85.0	70.0

OPERATIONAL NOISE LEVELS

A substantial increase in ambient noise is an increase that is *barely perceptible* (3 dBA). Operationally, the proposed project will result in occasional noise generating activities such as conversation and vehicle noise. These activities are common in commercial areas and do not represent a substantial increase in periodic noise in consideration that the proposed project location is surrounded to the north and east by residential and highway commercial use.

The proposed project will not result in increases in traffic noise that will cause noise standards to be exceeded. Therefore, no substantial impacts will result. In addition, increases in traffic due to the proposed project will not result in a perceptible noise increase at any of the studied roadway segments. No substantial impacts will occur.

6.3 Vibration Impacts

CONSTRUCTION VIBRATION

Construction activities that use heavy equipment are repetitive sources of vibration; therefore, the *continuous* threshold is used. Residential and commercial uses are located to the north, west, and east of the project site. As a worst-case scenario, the *historic and older buildings* threshold is used. Based on the threshold criteria summarized in Tables 4 and 5, vibration from use of heavy construction equipment for the proposed project would be below the thresholds to cause damage to nearby structures at the receptors shown in Table 6 (Construction Noise Impacts).

Construction of the project does not require rock blasting, pile driving, or the use of a jack hammer, but will use heavy equipment such as a grader and excavator. All of the receptors will experience less than *barely perceptible* vibration from the use of construction equipment. Therefore, the project will not result in excessive, strongly perceptible vibration.

With regard to long-term operational impacts, activities associated with the project will not result in any excessive vibration-related impacts to adjacent or on-site properties.



- LEGEND**
-  Project Limits
 -  Receptor Locations (Number 1-6)

Figure 4
Receptor Locations

7 MITIGATION MEASURES

The following mitigation measures are required to ensure that project-related noise levels will not exceed established thresholds.

Mitigation Measure N-1: The applicant shall acknowledge that the noise generated by operation of the proposed project must not exceed 65 dBA at the exterior side of any adjacent residences or result in an increase of more than 5 dBA in ambient noise if ambient noise is over 65 dBA Ldn.

Mitigation Measure N-2: The following shall apply to construction noise from tools and equipment:

- The operation of tools or equipment used in construction, drilling, repair, alteration, or demolition shall be limited to between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday. The applicant is requesting work to be allowed between 8:00 a.m. and 6:00 p.m. on Saturdays.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory- approved muffler systems.

With the implementation of Mitigation Measure N-1 and N-2, construction noise will feasibly be reduced to unsubstantial levels.

8 REFERENCES

- ¹ California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement.
- ² November 2009. California Governor's Office of Planning and Research. General Plan Guidelines.
- ³ 2003
- California Department of Transportation. Transportation- and Construction-Induced Vibration
- ⁴ Guidance Manual. June 2004
- ⁵ Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*. 2006
- California Department of Transportation. *Transportation and Construction Vibration Guidance*
- ⁶ *Manual. Division of Environmental Analysis. September 2013*
- ⁷ United States Bureau of Mines. Mining Machinery Noise Control Guidelines. 1983
- ⁸ United States Bureau of Mines. Noise Abatement Techniques for Construction Equipment. August 1979

Appendix A Noise Measurement Data

Summary

File Name on Meter	LxT_Data.015.s
File Name on PC	LxT_0005812-20210126 024343-LxT_Data.015.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(1) Outside project boundary to the north at intersection of Smokestack Rd and North K St

Measurement

Description	
Start	2021-01-26 02:43:43
Stop	2021-01-26 03:16:44
Duration	00:33:00.9
Run Time	00:33:00.9
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	54.7
LASE	87.7
EAS	65.023 $\mu\text{Pa}^2\text{h}$
EAS8	945.363 $\mu\text{Pa}^2\text{h}$

EAS40	4.727 mPa²h	
LZSpeak (max)	2021-01-26 03:14:29	100.3 dB
LASmax	2021-01-26 02:50:52	69.3 dB
LASmin	2021-01-26 02:48:19	42.9 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	67.3 dB
LASeq	54.7 dB
LCSeq - LASeq	12.6 dB
LAleq	56.4 dB
LAeq	54.7 dB
LAleq - LAeq	1.7 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	54.7			
LS(max)	69.3	2021/01/26 2:50:52		
LS(min)	42.9	2021/01/26 2:48:19		
LPeak(max)			100.3	2021/01/26 3:14:29

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	43.1	43.1 dB

Statistics

LAI5.00	59.0 dB
LAI10.00	57.4 dB
LAI33.30	54.4 dB
LAI50.00	53.0 dB
LAI66.60	51.4 dB
LAI90.00	48.6 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.022.s
File Name on PC	LxT_0005812-20210126 051610-LxT_Data.022.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(3) center of north end of project boundary

Measurement

Description	
Start	2021-01-26 05:16:10
Stop	2021-01-26 05:31:14
Duration	00:15:04.0
Run Time	00:15:04.0
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	55.3
LASE	84.9
EAS	34.313 $\mu\text{Pa}^2\text{h}$
EAS8	1.093 mPa^2h

EAS40	5.466 mPa²h	
LZSpeak (max)	2021-01-26 05:27:19	91.4 dB
LASmax	2021-01-26 05:27:19	72.1 dB
LASmin	2021-01-26 05:19:47	41.1 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	65.3 dB
LASeq	55.3 dB
LCSeq - LASeq	10.0 dB
LAleq	56.5 dB
LAeq	55.3 dB
LAleq - LAeq	1.2 dB

A		Z	
dB	Time Stamp	dB	Time Stamp
55.3			
72.1	2021/01/26 5:27:19		
41.1	2021/01/26 5:19:47		
		91.4	2021/01/26 5:27:19

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	40.3	40.3 dB

Statistics

LAI5.00	59.0 dB
LAI10.00	57.0 dB
LAI33.30	54.4 dB
LAI50.00	53.1 dB
LAI66.60	51.5 dB
LAI90.00	48.4 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45

Summary

File Name on Meter	LxT_Data.024.s
File Name on PC	LxT_0005812-20210126 054941-LxT_Data.024.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(5) Near center of project, adjacent to Needles Hwy

Measurement

Description	
Start	2021-01-26 05:49:41
Stop	2021-01-26 06:16:44
Duration	00:27:03.0
Run Time	00:27:03.0
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	58.2
LASE	90.3
EAS	118.404 $\mu\text{Pa}^2\text{h}$
EAS8	2.101 mPa^2h

EAS40	10.505 mPa ² h	
LZSpeak (max)	2021-01-26 06:11:33	94.8 dB
LASmax	2021-01-26 06:00:11	73.2 dB
LASmin	2021-01-26 06:07:36	43.5 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	68.9 dB
LASeq	58.2 dB
LCSeq - LASeq	10.7 dB
LAleq	59.5 dB
LAeq	58.2 dB
LAleq - LAeq	1.4 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	58.2			
LS(max)	73.2	2021/01/26 6:00:11		
LS(min)	43.5	2021/01/26 6:07:36		
LPeak(max)			94.8	2021/01/26 6:11:33

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	45.7	45.7 dB

Statistics

LAI5.00	63.7 dB
LAI10.00	59.8 dB
LAI33.30	58.2 dB
LAI50.00	53.8 dB
LAI66.60	49.7 dB
LAI90.00	47.0 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.025.s
File Name on PC	LxT_0005812-20210126 062021-LxT_Data.025.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(6) corner of Race and North K St outside project boundary to the west

Measurement

Description	
Start	2021-01-26 06:20:21
Stop	2021-01-26 06:35:26
Duration	00:15:05.4
Run Time	00:15:05.4
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	67.8
LASE	97.4
EAS	603.727 $\mu\text{Pa}^2\text{h}$
EAS8	19.204 mPa^2h

EAS40	96.020 mPa²h	
LZSpeak (max)	2021-01-26 06:31:16	104.5 dB
LASmax	2021-01-26 06:31:16	78.6 dB
LASmin	2021-01-26 06:33:49	50.0 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	76.8 dB
LASeq	67.8 dB
LCSeq - LASeq	9.0 dB
LAleq	68.8 dB
LAeq	67.8 dB
LAleq - LAeq	1.0 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	67.8			
LS(max)	78.6	2021/01/26 6:31:16		
LS(min)	50.0	2021/01/26 6:33:49		
LPeak(max)			104.5	2021/01/26 6:31:16

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	52.8	52.8 dB

Statistics

LAI5.00	72.6 dB
LAI10.00	70.7 dB
LAI33.30	67.8 dB
LAI50.00	66.1 dB
LAI66.60	64.5 dB
LAI90.00	61.0 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.046.s
File Name on PC	LxT_0005812-20210202 191512-LxT_Data.046.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(7) west end of the center of project boundary near Needles Hwy

Measurement

Description	
Start	2021-02-02 19:15:12
Stop	2021-02-02 19:35:34
Duration	00:20:17.1
Run Time	00:20:17.1
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	59.7
LASE	90.5
EAS	124.978 $\mu\text{Pa}^2\text{h}$
EAS8	2.957 mPa^2h

EAS40	14.787 mPa²h	
LZSpeak (max)	2021-02-02 19:27:49	100.0 dB
LASmax	2021-02-02 19:27:49	79.0 dB
LASmin	2021-02-02 19:26:21	44.6 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	69.9 dB
LASeq	59.7 dB
LCSeq - LASeq	10.3 dB
LAleq	61.7 dB
LAeq	59.7 dB
LAleq - LAeq	2.0 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	59.7			
LS(max)	79.0	2021/02/02 19:27:49		
LS(min)	44.6	2021/02/02 19:26:21		
LPeak(max)			100.0	2021/02/02 19:27:49

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	45.9	45.9 dB

Statistics

LAI5.00	66.0 dB
LAI10.00	62.1 dB
LAI33.30	54.7 dB
LAI50.00	52.8 dB
LAI66.60	51.1 dB
LAI90.00	49.1 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary				
File Name on Meter	LxT_Data.047.s			
File Name on PC	LxT_0005812-20210202 193837-LxT_Data.047.ldbin			
Serial Number	0005812			
Model	SoundTrack LxT®			
Firmware Version	2.302			
User	Jeff Johnson, Andrew Johnstone			
Location	City of Needles			
Job Description	Riverlux Resort			
Note	(8) south west edge of project boundary			
Measurement				
Description				
Start	2021-02-02 19:38:37			
Stop	2021-02-02 19:58:39			
Duration	00:20:02.2			
Run Time	00:20:02.2			
Pause	00:00:00.0			
Pre-Calibration	2019-02-06 11:05:13			
Post-Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Exponential			
Overload	143.7 dB			
	A	C	Z	
Under Range Peak	99.9	96.9	101.9	dB
Under Range Limit	48.9	46.9	54.9	dB
Noise Floor	35.7	36.3	44.0	dB
Results				
LASeq	62.4			
LASE	93.2			
EAS	232.616 µPa²h			
EAS8	5.573 mPa²h			

EAS40	27.863 mPa²h	
LZSpeak (max)	2021-02-02 19:38:48	125.8 dB
LASmax	2021-02-02 19:38:53	85.5 dB
LASmin	2021-02-02 19:45:37	43.8 dB
SEA	138.2 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	3	2.3 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	81.5 dB
LASeq	62.4 dB
LCSeq - LASeq	19.1 dB
LAleq	71.8 dB
LAeq	62.4 dB
LAleq - LAeq	9.4 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	62.4			
LS(max)	85.5	2021/02/02 19:38:53		
LS(min)	43.8	2021/02/02 19:45:37		
LPeak(max)			125.8	2021/02/02 19:38:48

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	0.01 %
Projected Dose	-99.94	0.24 %
TWA (Projected)	-99.9	46.4 dB
TWA (t)	-99.9	23.5 dB
Lep (t)	48.6	48.6 dB

Statistics

LAI5.00	55.1 dB
LAI10.00	53.4 dB
LAI33.30	50.5 dB
LAI50.00	49.5 dB
LAI66.60	48.5 dB
LAI90.00	47.0 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.048.s
File Name on PC	LxT_0005812-20210202 200106-LxT_Data.048.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(9) East side outside center of project boundary adjacent to River Road

Measurement

Description	
Start	2021-02-02 20:01:06
Stop	2021-02-02 20:21:09
Duration	00:20:03.2
Run Time	00:20:03.2
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	63.7
LASE	94.5
EAS	315.784 $\mu\text{Pa}^2\text{h}$
EAS8	7.559 mPa^2h

EAS40	37.793 mPa²h	
LZSpeak (max)	2021-02-02 20:01:19	114.0 dB
LASmax	2021-02-02 20:06:06	80.2 dB
LASmin	2021-02-02 20:19:42	43.4 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	72.6 dB
LASeq	63.7 dB
LCSeq - LASeq	8.9 dB
LAleq	67.2 dB
LAeq	63.7 dB
LAleq - LAeq	3.4 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	63.7			
LS(max)	80.2	2021/02/02 20:06:06		
LS(min)	43.4	2021/02/02 20:19:42		
LPeak(max)			114.0	2021/02/02 20:01:19

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	0.00 %
Projected Dose	-99.94	0.00 %
TWA (Projected)	-99.9	17.3 dB
TWA (t)	-99.9	-5.6 dB
Lep (t)	49.9	49.9 dB

Statistics

LAI5.00	70.8 dB
LAI10.00	68.1 dB
LAI33.30	57.7 dB
LAI50.00	53.3 dB
LAI66.60	50.7 dB
LAI90.00	47.5 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.049.s
File Name on PC	LxT_0005812-20210202 202309-LxT_Data.049.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(10) Southeast corner of project boundary outside limits adjacent to River Road

Measurement

Description	
Start	2021-02-02 20:23:09
Stop	2021-02-02 20:43:15
Duration	00:20:05.8
Run Time	00:20:05.8
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	63.9
LASE	94.8
EAS	332.387 $\mu\text{Pa}^2\text{h}$
EAS8	7.939 mPa^2h

EAS40	39.695 mPa²h	
LZSpeak (max)	2021-02-02 20:37:19	105.0 dB
LASmax	2021-02-02 20:32:01	81.9 dB
LASmin	2021-02-02 20:27:48	45.7 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	71.8 dB
LASeq	63.9 dB
LCSeq - LASeq	7.8 dB
LAleq	67.6 dB
LAeq	63.9 dB
LAleq - LAeq	3.7 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	63.9			
LS(max)	81.9	2021/02/02 20:32:01		
LS(min)	45.7	2021/02/02 20:27:48		
LPeak(max)			105.0	2021/02/02 20:37:19

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	0.00 %
Projected Dose	-99.94	0.05 %
TWA (Projected)	-99.9	34.9 dB
TWA (t)	-99.9	12.0 dB
Lep (t)	50.2	50.2 dB

Statistics

LAI5.00	71.5 dB
LAI10.00	67.7 dB
LAI33.30	55.0 dB
LAI50.00	51.8 dB
LAI66.60	49.8 dB
LAI90.00	48.1 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.050.s
File Name on PC	LxT_0005812-20210202 204606-LxT_Data.050.lbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(11) Near center of southern edge of project boundary

Measurement

Description	
Start	2021-02-02 20:46:06
Stop	2021-02-02 21:06:34
Duration	00:20:28.9
Run Time	00:20:28.9
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	53.4
LASE	84.3
EAS	29.679 $\mu\text{Pa}^2\text{h}$
EAS8	695.553 $\mu\text{Pa}^2\text{h}$

EAS40	3.478 mPa²h	
LZSpeak (max)	2021-02-02 20:46:53	117.8 dB
LASmax	2021-02-02 20:46:53	76.6 dB
LASmin	2021-02-02 20:57:06	45.7 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	66.0 dB
LASeq	53.4 dB
LCSeq - LASeq	12.6 dB
LAleq	61.4 dB
LAeq	53.4 dB
LAleq - LAeq	8.0 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	53.4			
LS(max)	76.6	2021/02/02 20:46:53		
LS(min)	45.7	2021/02/02 20:57:06		
LPeak(max)			117.8	2021/02/02 20:46:53

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	39.7	39.7 dB

Statistics

LAI5.00	56.3 dB
LAI10.00	54.4 dB
LAI33.30	51.4 dB
LAI50.00	50.2 dB
LAI66.60	49.4 dB
LAI90.00	48.0 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.023.s
File Name on PC	LxT_0005812-20210126 053214-LxT_Data.023.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(4) Outside project boundary to the north east, adjacent to River Road

Measurement

Description	
Start	2021-01-26 05:32:14
Stop	2021-01-26 05:47:17
Duration	00:15:02.5
Run Time	00:15:02.5
Pause	00:00:00.0
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	62.5
LASE	92.0
EAS	178.105 $\mu\text{Pa}^2\text{h}$
EAS8	5.684 mPa^2h

EAS40	28.418 mPa²h	
LZSpeak (max)	2021-01-26 05:34:43	98.3 dB
LASmax	2021-01-26 05:34:45	81.6 dB
LASmin	2021-01-26 05:41:45	44.7 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	68.7 dB
LASeq	62.5 dB
LCSeq - LASeq	6.2 dB
LAleq	66.8 dB
LAeq	62.5 dB
LAleq - LAeq	4.3 dB

	A		Z	
	dB	Time Stamp	dB	Time Stamp
Leq	62.5			
LS(max)	81.6	2021/01/26 5:34:45		
LS(min)	44.7	2021/01/26 5:41:45		
LPeak(max)			98.3	2021/01/26 5:34:43

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	0.00 %
Projected Dose	-99.94	0.05 %
TWA (Projected)	-99.9	34.5 dB
TWA (t)	-99.9	9.5 dB
Lep (t)	47.5	47.5 dB

Statistics

LAI5.00	67.7 dB
LAI10.00	65.0 dB
LAI33.30	59.2 dB
LAI50.00	57.6 dB
LAI66.60	55.8 dB
LAI90.00	51.8 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Summary

File Name on Meter	LxT_Data.017.s
File Name on PC	LxT_0005812-20210126 034517-LxT_Data.017.ldbin
Serial Number	0005812
Model	SoundTrack LxT®
Firmware Version	2.302
User	Jeff Johnson, Andrew Johnstone
Location	City of Needles
Job Description	Riverlux Resort
Note	(2) Outside project boundary, to the north west adjacent to North K St and Smokestack Rd

Measurement

Description	
Start	2021-01-26 03:45:17
Stop	2021-01-26 04:00:21
Duration	00:15:04.1
Run Time	00:00:00.8
Pause	00:15:03.3
Pre-Calibration	2019-02-06 11:05:13
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamplifier	PRMLxT1		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	143.7 dB		
	A	C	Z
Under Range Peak	99.9	96.9	101.9 dB
Under Range Limit	48.9	46.9	54.9 dB
Noise Floor	35.7	36.3	44.0 dB

Results

LASeq	53.8
LASE	52.8
EAS	0.021 $\mu\text{Pa}^2\text{h}$
EAS8	766.743 $\mu\text{Pa}^2\text{h}$

EAS40	3.834 mPa²h	
LZSpeak (max)	2021-01-26 03:45:17	-99.9 dB
LASmax	2021-01-26 03:45:17	53.9 dB
LASmin	2021-01-26 03:45:17	53.6 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZSpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

LCSeq	69.4 dB
LASeq	53.8 dB
LCSeq - LASeq	15.6 dB
LAleq	54.6 dB
LAeq	53.3 dB
LAleq - LAeq	1.3 dB

	A		C		Z
	dB	Time Stamp	dB	Time Stamp	dB
Leq	53.3				
LS(max)	53.9	2021/01/26 3:45:17			
LS(min)	53.6	2021/01/26 3:45:17			

Overload Count	0
Overload Duration	0.0 s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exchange Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	-99.94	-99.94 %
Projected Dose	-99.94	-99.94 %
TWA (Projected)	-99.9	-99.9 dB
TWA (t)	-99.9	-99.9 dB
Lep (t)	8.2	8.2 dB

Statistics

LAI5.00	53.9 dB
LAI10.00	53.9 dB
LAI33.30	53.8 dB
LAI50.00	53.8 dB
LAI66.60	53.8 dB
LAI90.00	53.7 dB

Calibration History				
Preamp	Date	dB re. 1V/Pa	6.3	8.0
PRMLxT1	2019-02-06 11:05:13	-49.87	66.83	61.85
PRMLxT1	2019-02-06 08:42:27	-49.77	31.13	37.52
PRMLxT1	2019-02-06 08:01:01	-49.03	18.45	22.42

Roadway Construction Noise Model (RCNM),\

Report date: 4/10/2022

Case Description:

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor 1	Residential	62.5	62.5	62.5

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)
			Spec Lmax (dBA)	Actual Lmax (dBA)	
Backhoe	No	40		77.6	50
Excavator	No	40		80.7	50
Grader	No	40	85		50
All Other Equipment > 5 HP	No	50	85		50

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)		
	*Lmax	L10	Day Lmax	L10	Evening Lmax
Backhoe	77.6	76.6	N/A	N/A	N/A
Excavator	80.7	79.7	N/A	N/A	N/A
Grader	85	84	N/A	N/A	N/A
All Other Equipment > 5 HP	85	85	N/A	N/A	N/A
Total	85	88.5	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor 2	Commercial	67.8	67.8	67.8

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)
			Spec Lmax (dBA)	Actual Lmax (dBA)	
Backhoe	No	40		77.6	50
Excavator	No	40		80.7	50
Grader	No	40	85		50
All Other Equipment > 5 HP	No	50	85		50

Results

Calculated (dBA)	Noise Limits (dBA)	
	Day	Evening

Equipment	*Lmax	L10	Lmax	L10	Lmax
Backhoe	77.6	76.6	N/A	N/A	N/A
Excavator	80.7	79.7	N/A	N/A	N/A
Grader	85	84	N/A	N/A	N/A
All Other Equipment > 5 HP	85	85	N/A	N/A	N/A
Total	85	88.5	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor 3	Residential	59.7	59.7	59.7

Description	Impact	Device	Usage(%)	Equipment		Receptor Distance (feet)
				Spec Lmax (dBA)	Actual Lmax (dBA)	
Backhoe	No		40		77.6	25
Excavator	No		40		80.7	25
Grader	No		40	85		25
All Other Equipment > 5 HP	No		50	85		25

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)		
			Day	Evening	
	*Lmax	L10	Lmax	L10	Lmax
Backhoe	83.6	82.6	N/A	N/A	N/A
Excavator	86.7	85.8	N/A	N/A	N/A
Grader	91	90	N/A	N/A	N/A
All Other Equipment > 5 HP	91	91	N/A	N/A	N/A
Total	91	94.5	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Receptor 4	Residential	63.7	63.7	63.7

Description	Impact	Device	Usage(%)	Equipment		Receptor Distance (feet)
				Spec Lmax (dBA)	Actual Lmax (dBA)	
Backhoe	No		40		77.6	50
Excavator	No		40		80.7	50
Grader	No		40	85		50
All Other Equipment > 5 HP	No		50	85		50

		Results			
		Calculated (dBA)		Noise Limits (dBA)	
		Day		Evening	
Equipment		*Lmax	L10	Lmax	L10
Backhoe		77.6	76.6	N/A	N/A
Excavator		80.7	79.7	N/A	N/A
Grader		85	84	N/A	N/A
All Other Equipment > 5 HP		85	85	N/A	N/A
	Total	85	88.5	N/A	N/A
*Calculated Lmax is the Loudest value.					

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Receptor 5	Residential	62.4	62.4	62.4

		Equipment		
		Spec	Actual	Receptor
		Lmax	Lmax	Distance
Description	Impact Device	Usage(%)	(dBA)	(feet)
Backhoe	No	40	77.6	130
Excavator	No	40	80.7	130
Grader	No	40	85	130
All Other Equipment > 5 HP	No	50	85	130

		Results			
		Calculated (dBA)		Noise Limits (dBA)	
		Day		Evening	
Equipment		*Lmax	L10	Lmax	L10
Backhoe		69.3	68.3	N/A	N/A
Excavator		72.4	71.4	N/A	N/A
Grader		76.7	75.7	N/A	N/A
All Other Equipment > 5 HP		76.7	76.7	N/A	N/A
	Total	76.7	80.2	N/A	N/A
*Calculated Lmax is the Loudest value.					

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Receptor 6	Commercial	63.9	63.9	63.9

		Equipment		
		Spec	Actual	Receptor
		Lmax	Lmax	Distance
Description	Impact Device	Usage(%)	(dBA)	(feet)
Backhoe	No	40	77.6	50
Excavator	No	40	80.7	50

Grader	No	40	85	50
All Other Equipment > 5 HP	No	50	85	50

Equipment	Results				
	Calculated (dBA)		Noise Limits (dBA)		
	*Lmax	L10	Day	Evening	
			Lmax	L10	Lmax
Backhoe	77.6	76.6	N/A	N/A	N/A
Excavator	80.7	79.7	N/A	N/A	N/A
Grader	85	84	N/A	N/A	N/A
All Other Equipment > 5 HP	85	85	N/A	N/A	N/A
Total	85	88.5	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Estimated
Shielding
(dBA)

0
0
0
0

Noise Limit Exceedance (dBA)								
	Night		Day		Evening		Night	
L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Estimated
Shielding
(dBA)

0
0
0
0

Noise Limit Exceedance (dBA)			
Night	Day	Evening	Night

L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Estimated
Shielding
(dBA)

0
0
0
0

Noise Limit Exceedance (dBA)

	Night		Day		Evening		Night	
L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Estimated
Shielding
(dBA)

0
0
0
0

Noise Limit Exceedance (dBA)								
	Night		Day		Evening		Night	
L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Estimated
Shielding
(dBA)

0
0
0
0

Noise Limit Exceedance (dBA)								
	Night		Day		Evening		Night	
L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Estimated
Shielding
(dBA)

0
0

00

[illegible]

APPENDIX I

Fire Condition Letter



San Bernardino County Fire Department

San Bernardino Office— SBGC	North Desert Office— HDGC	East Valley Office— San Bernardino City	South Desert Office
(909) 387-4140	(760) 995-8201	(909) 918-2201	(760) 995-8201

Date: 09/12/2022

Project Name: RiverLux Resort
Project Description: Tract Map #20478
Permit Number: FPLN-2022-00117
Location: 429 N K ST, NEEDLES, CA 92363
APN: 0185-067-08-0000
Project Type: Tentative Tract Map (5-100 lots)
City Project Proposal: Tentative tract map for 60 residential lots, a three commercial lots for future use.

Dear Applicant,

With respect to the conditions of approval regarding the above referenced project, the San Bernardino County Fire Department requires the following fire protection measures to be provided in accordance with applicable local ordinances, codes, and/or recognized fire protection standards.

The **Fire Conditions Attachment** of this document sets forth the FIRE CONDITIONS and STANDARDS which are applied to this project.

Sincerely,

*The Office of the Fire Marshal
Community Safety Division
San Bernardino County Fire Department*

FIRE CONDITIONS ATTACHMENT



Date: 09/12/2022

Permit Number: FPLN-2022-00117

Location: 429 N K ST, NEEDLES, CA
92363

APN: 0185067080000

FIRE CONDITIONS AND STANDARDS

Access

The development shall have a minimum of four points of vehicular access. These are for fire/emergency equipment access and for evacuation routes. a. Single Story Road Access Width. All buildings shall have access provided by approved roads, alleys and private drives with a minimum twenty-six (26) foot unobstructed width and vertically to fourteen (14) feet six (6) inches in height. Other recognized standards may be more restrictive by requiring wider access provisions. b. Multi-Story Road Access Width. Buildings three (3) stories in height or more shall have a minimum access of thirty (30) feet unobstructed width and vertically to fourteen (14) feet six (6) inches in height.

Access – 150+ feet

Roadways exceeding one hundred fifty (150) feet in length shall be approved by the Fire Department. These shall be extended to within one hundred fifty (150) feet of and shall give reasonable access to all portions of the exterior walls of the first story of any building.

Access – 30% slope

Where the natural grade between the access road and building is in excess of thirty percent (30%), an access road shall be provided within one hundred and fifty (150) feet of all buildings. Where such access cannot be provided, a fire protection system shall be installed. Plans shall be submitted to and approved by the Fire Department.

Additional Requirements

In addition to the Fire requirements stated herein, other onsite and offsite improvements may be required which cannot be determined from tentative plans at this time and would have to be reviewed after more complete improvement plans and profiles have been submitted to this office.

Combustible Protection

Prior to combustibles being placed on the project site an approved all-weather fire apparatus access surface and operable fire hydrants with acceptable fire flow shall be installed. The topcoat of asphalt does not have to be installed until final inspection and occupancy.

Combustible Vegetation

Combustible vegetation shall be removed as follows: a. Where the average slope of the site is less than 15% - Combustible vegetation shall be removed a minimum distance of thirty (30) feet from all structures or to the property line, whichever is less. b. Where the average slope of the site is 15% or greater - Combustible vegetation shall be removed a minimum one hundred (100) feet from all structures or to the property line, whichever is less.

Fire Fee

The required fire fees shall be paid to the San Bernardino County Fire Department/Community Safety Division.

Fire Flow Test

Your submittal did not include a flow test report to establish whether the public water supply is capable of meeting your project fire flow demand. You will be required to produce a current flow test report from your water purveyor demonstrating that the fire flow demand is satisfied. This requirement shall be completed prior to combination inspection by Building and Safety.

Fire Lanes

The applicant shall submit a fire lane plan to the Fire Department for review and approval. Fire lane curbs shall be painted red. The "No Parking, Fire Lane" signs shall be installed on public/private roads in accordance with the approved plan.

Fire Sprinkler NFPA 13D

An automatic life safety fire sprinkler system complying with NFPA Pamphlet #13D and the Fire Department standards is required. The applicant shall hire a Fire Department approved fire sprinkler contractor or be the approved homeowner/installer. The fire sprinkler contractor/installer shall submit plans with hydraulic calculations and manufacture's specification sheets to the Fire Department for approval. The required fees shall be paid at the time of plan submittal. Minimum water supply shall be in accordance with current fire department standards. The applicant or contractor shall contact their local water purveyor to obtain specifications on installing a residential fire sprinkler system within the jurisdiction of the water purveyor. The applicant shall attach a letter from the water purveyor indicating the types of systems allowed in that jurisdiction.

Hydrant Marking

Blue reflective pavement markers indicating fire hydrant locations shall be installed as specified by the Fire Department. In areas where snow removal occurs or non-paved roads exist, the blue reflective hydrant marker shall be posted on an approved post along the side of the road, no more than three (3) feet from the hydrant and at least six (6) feet high above the adjacent road.

Illuminated Site Diagram

The applicant shall submit for review and approval a site diagram plan to the Fire Department. The applicant shall install at each entrance to a multi-family complex an illuminated diagrammatic representation of the complex, which shows the location of each unit and each fire hydrant.

Inspection by the Fire Department

Permission to occupy or use the building (certificate of Occupancy or shell release) will not be granted until the Fire Department inspects, approves and signs off on the Building and Safety job card for "fire final".

Jurisdiction

The above referenced project is under the jurisdiction of the San Bernardino County Fire Department herein "Fire Department". Prior to any construction occurring on any parcel, the applicant shall contact the Fire Department for verification of current fire protection requirements. All new construction shall comply with the current California Fire Code requirements and all applicable status, codes, ordinances and standards of the Fire Department.

Key Box

An approved Fire Department key box is required. In commercial, industrial and multi-family complexes, all swing gates shall have an approved fire department Knox Lock.

Override Switch

Where an automatic electric security gate is used, an approved Fire Department override switch (Knox ®) is required.

Permit Expiration

Construction permits, including Fire Condition Letters, shall automatically expire and become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Suspension or abandonment shall mean that no inspection by the Department has occurred within 180 days of any previous inspection. After a construction permit or Fire Condition Letter, becomes invalid and before such previously approved work recommences, a new permit shall be first obtained and the fee to recommence work shall be one-half the fee for the new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. A request to extend the Fire Condition Letter or Permit may be made in writing PRIOR TO the expiration date justifying the reason that the Fire Condition Letter should be extended.

Primary Access Paved

Prior to building permits being issued to any new structure, the primary access road shall be paved or an all-weather surface and shall be installed as specified in the General Requirement conditions, including width, vertical clearance and turnouts.

Residential Addressing

The street address shall be installed on the building with numbers that are a minimum of four (4) inches in height and with a one half (1/2) inch stroke. The address shall be visible from the street. During the hours of darkness, the numbers shall be internally and electrically illuminated with a low voltage power source. Numbers shall contrast with their background and be legible from the street. Where the building is fifty (50) feet or more from the roadway, additional contrasting four (4) inch numbers shall be displayed at the property access entrances.

Secondary Access Paved

Prior to building permits being issued to any new structure, the secondary access road shall be paved or an all-weather surface and shall be installed as specified in the General Requirement conditions including width, vertical clearance and turnouts.

Spark Arrestor

An approved spark arrestor is required. Every chimney that is used in conjunction with any fireplace or any heating appliance in which solid or liquid fuel are used, shall have an approved spark arrestor visible from the ground that is maintained in conformance with the California Fire Code.

Street Sign

This project is required to have an approved street sign (temporary or permanent). The street sign shall be installed on the nearest street corner to the project. Installation of the temporary sign shall be prior any combustible material being placed on the construction site. Prior to final inspection and occupancy of the first structure, the permanent street sign shall be installed.

Surface

Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities. Road surface shall meet the approval of the Fire Chief prior to installation. All roads shall be designed to 85% compaction and/or paving and hold the weight of Fire Apparatus at a minimum of 80K pounds.

Turnaround

Turnaround. An approved turnaround shall be provided at the end of each roadway one hundred and fifty (150) feet or more in length. Cul-de-sac length shall not exceed six hundred (600) feet; all roadways shall not exceed a 12 % grade and have a minimum of forty-five (45) foot radius for all turns. In the Fire Safety Overlay District areas, there are additional requirements.

Water System

Prior to any land disturbance, the water systems shall be designed to meet the required fire flow for this development and shall be approved by the Fire Department. The required fire flow shall be determined by using California Fire Code. The Fire Flow for this project shall be: 1,000 GPM for a two hour duration at 20 psi residual operating pressure. Fire Flow is based on a 3,600 sq.ft. structure.

Water System Residential

A water system approved by the Fire Department is required. The system shall be operational prior to any combustibles being stored on the site. Detached single family residential developments may increase the spacing between hydrants to be no more than six hundred (600) feet and no more than three hundred (300) feet (as measured along vehicular travel-ways) from the driveway on the address side of the proposed single-family structure.

APPENDIX J

VMT Screening Evaluation



February 22, 2022

Mr. Jeffrey West
RiverLux Resort/Tri-State Advertising
29991 Canyon Hills Road Suite 1709 PMB-300
Lake Elsinore, CA. 92532

SUBJECT: RIVERLUX RESORT VEHICLE MILES TRAVELED (VMT) SCREENING EVALUATION

Dear Mr. Jeffrey West:

The following Vehicle Miles Traveled (VMT) Screening Evaluation has been prepared for the proposed RiverLux Resort development (**Project**), which is located on both sides of Needles Highway between North K Street and River Road in the City of Needles.

PROJECT OVERVIEW

It is our understanding that the project is to consist of a Townhome/Recreational Vehicle (RV) Community in Needles, CA that will be constructed on 14 acres of land along Needles Highway between North K Street and River Road. The structures to be built consist of commercial and livable space. The commercial property will include a 4,000 square foot grocery store. The townhouses proposed for construction will consist of 128 single family townhomes which accommodate parking for RV's (See Attachment A).

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory, the City of Needles has adopted their thresholds and methodology City of Needles Resolution No. 06-03-2020 PC SB 743 Threshold Adoption (June 2020) (**City Guidelines**) (2). The adopted City Guidelines have been utilized to prepare this VMT screening evaluation.

PROJECT LEVEL SCREENING

Under the City Guidelines, projects are required to be evaluated by available screening criteria based on their location and project type to determine if a presumption of a less than significant transportation impact can be made. It is our understanding that the City of Needles utilizes the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool (**Screening Tool**). The Screening Tool allows users to input an assessor's parcel number (APN) to determine if a project's location meets one or more of the screening thresholds for land use projects. The following screening steps are listed in the City Guidelines:

- Low VMT Area Screening
- Project Type Screening

LOW VMT AREA SCREENING

The City Guidelines states that "residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area."¹ The Screening Tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the SBCTA region. The Project's physical location is selected in the Screening Tool to determine VMT generated by the existing TAZ as compared to the City's impact threshold of 15% below the County of San Bernardino VMT per service population (SP). SBCTA publishes jurisdictional averages for its member agencies. For the County of San Bernardino, the baseline VMT per SP is 33.31. Therefore, 15% below San Bernardino baseline VMT per SP is 28.31 VMT per SP. The parcel containing the proposed Project was selected and the Screening Tool was run for the Origin-Destination VMT per service population measure of VMT. Based on the Screening Tool results (See Attachment B), the TAZ in which the Project is located is within a low VMT generating zone of 28.0 VMT per SP or 16.05% below the San Bernardino County baseline average.

Low VMT Area screening criteria is met.

PROJECT TYPE SCREENING

The City Guidelines identifies that local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition to local serving retail, other types of local serving uses such as day care centers, non-destination hotels, affordable housing, places of worship, municipal services, and other local essential services may also be presumed to have a less than significant impact as local serving in nature and

¹ City Guidelines; Page 15

Mr. Jeffrey West
RiverLux Resort/Tri-State Advertising
February 22, 2022
Page 3 of 4

would tend to shorten vehicle trips. The proposed Project includes a local serving retail (i.e., coffee shop with only a drive thru) of less than 50,000 square feet. The Project intends to develop a commercial retail center of 4,000 square feet. The commercial retail component is below the 50,000 square feet of local serving retail threshold.

Project Type screening criteria is met for the commercial retail component.

CONCLUSION

Based on our review of applicable VMT screening thresholds, the Project meets the Low VMT Area screening. Additionally, the commercial retail component meets the Project Type Screening. The Project would therefore result in a less than significant VMT impact finding. No additional VMT analysis is required.

If you have any questions, please contact me directly at aso@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.



Alexander So
Senior Analyst

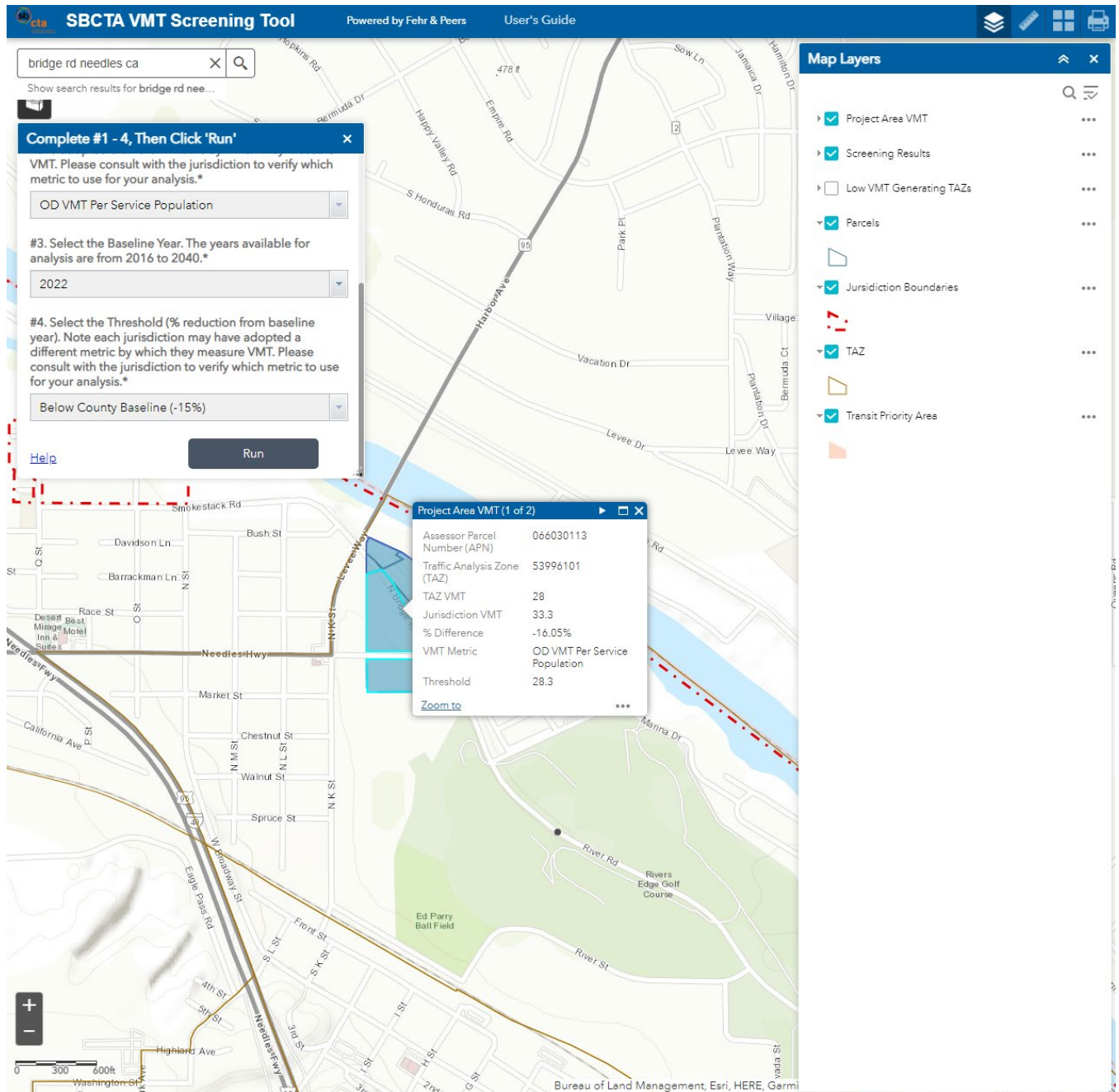
REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **City of Needles.** *Resolution No. 06-03-2020 PC SB 743 Threshold Adoption.* June 2020.

ATTACHMENT A
PRELIMINARY SITE PLAN



ATTACHMENT B
SBCTA SCREENING TOOL RESULTS



APPENDIX K

City of Needles – Will Serve Letters

NEEDLES PUBLIC UTILITY AUTHORITY

Will Serve Electric Service

DATE: 9/15/22

TO: Riverlux Resort, Jeff West, Owner/Agent/Applicant (Applicant)

Project Site: Needles, CA

APN: 0185-058-15-0000, 0185-067-15-0000, 0660-301-13-0000, 0185-067-20-0000, 0185-109-48-0000, 0186-021-01-0000, 0185-067-08-0000

This Project is located in the City of Needles (City) and the service area of the Needles Public Utility Authority (NPUA). The NPUA will serve the above subject Project's electrical requirements pursuant to the NPUA/City ordinances, rules and regulations, subject to the conditions of Project approval and the approved Project Site Plan, and the following terms, conditions and limitations:

- Electrical service will be provided to the Project through service lines and a single connection to the building(s) on the Project Site, constructed in accordance with the approved Project Site Plan, the NPUA's requirements for grounding and connection, and all applicable codes and regulations. The full cost of the NPUA's installation of the required facilities shall be borne by the Applicant.
- The Applicant submitted tentative track no. 20478 with 60 lots which are a mix of residential and commercial lots. The following terms are added as a condition of the proposed development and must be provided prior to any develop on the stated above parcels;
 - a. The Applicant must identify and propose a phase development and install the entire underground electrical infrastructure for each phase this must be presented and approved by the City/NPUA;
 - b. The Applicant must submit the electrical drawings developed and stamped by a licensed Engineer, the City/NPUA must approve the conduit size which includes a pull string, transformer pads and secondary boxes that meet the City/NPUA standards;
 - c. The Applicant is responsible to pay the City/NPUA for the transformers needed for the proposed development. The estimated lead times are 30+ weeks and subject to change;
 - d. All electrical installations must be inspected and approved by the City/NPUA;
 - e. Each service will be required to pay for electrical capacity fees once the panel and wire is set which as of the date of this will serve is;

Residential \$1,000

Commercial \$1,400

Industrial \$2,030

*Please note that these fees are subject to change

- f. The Applicants development is subject to the NPUA Electric Terms and Conditions attached
- Electrical service provided by the NPUA to the Project will not exceed a total of 500KW or 1/2MW. Additional service capacity will require additional review, including load demands and confirmation by the NPUA of its ability to serve and the terms of service.
 - The service connection(s) (AMP size to be determined) will not be used in connection with the Project until such time as the City has granted occupancy of the building and the Applicant has paid all City/NPUA fees and received all required permits.
 - Fees payable to NPUA include but may not be limited to \$50,000 for the power allocation which will be refunded after two years if the development does not occur. The applicant must submit a formal request for the refund.
 - If it is determined that the requested electric service will require additional off-site system upgrades, NUPA/City may require oversizing of facilities, subject to the NPUA's/City's adopted regulations and terms for reimbursement as new development occurs.
 - To the extent additional public improvements or system upgrades are required for the Project, Applicant shall post a deposit for the estimated cost of line, transformer, substation and other required infrastructure improvements, and the full estimated cost of improvements will be due prior to any equipment order and/or installation.
 - The NPUA reserves the right to increase electricity rates and charges established pursuant to Proposition 26, and to amend its terms of service, and the Project will be subject to any increased or additional rates, charges and regulations implemented by the NPUA and applicable to similar facilities or uses, any limitations or restrictions placed on electric service by other state, federal or regulatory agencies, or due to unforeseen availability and/or the NPUA's ability to obtain or provide electricity for the Project. Changes in regulations may also require that the Project initiate conservation measures.
 - In accepting the terms of electric service provided herein, the Applicant agrees that the NPUA and the City shall be free from any liability to the Applicant, its successors in interest, or any other interested party, for damage to property, equipment or crops which may result from power shortages or outages affecting the Project which are beyond the reasonable control of the NPUA and/or the City.
 - This Will Serve letter is conditioned on Applicant's compliance at all times with the NPUA/City Rules and Regulations for electric service and the Project conditions of approval.

This Will Serve Electric Service commitment runs with the parcels stated above and cannot be transferred or relocated to any other project or property without NPUA approval. If the Project is abandoned or discontinued or permits are revoked or

suspended, the electric service provided pursuant to this letter may be terminated and the electric capacity reallocated or redistributed to other properties and/or projects by the NPUA in its sole discretion.

Inspection and activation of the electrical service connection will be scheduled by the City and the NPUA throughout construction up to and including issuance of the certificate of occupancy for the Project.

This Will Serve Electric Service commitment is conditioned upon compliance with all applicable requirements of the City and the NPUA, payment in full of any required fees and deposits, and your agreement to comply with the foregoing conditions and limitations.

If you have any questions or need additional information regarding terms of NPUA electrical service to your Project, please contact the undersigned at 760-326-5700.

Sincerely,



Rainie Torrance

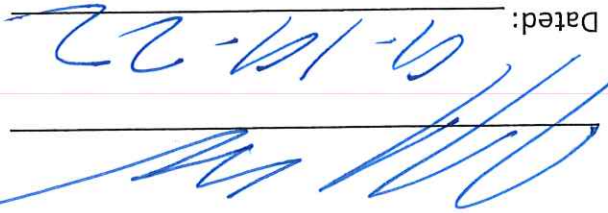
Assistant Utility Manager

rtorrance@cityofneedles.com

(760)326-5700 X140

CONSENT AND AGREEMENT:

The undersigned Owner/Agent/Applicant is the applicant/recipient of the related to the Project, and has reviewed, has full legal authority to and does understand and agree to the foregoing terms and conditions for connection and provision of electric service to the above-described Property and Project by the Needles Public Utility Authority and/or the City of Needles.



Dated: 9-19-22

CITY OF NEEDLES
NEEDLES, CALIFORNIA

TERMS AND CONDITIONS FOR THE SALE OF ELECTRIC SERVICES

The following TERMS AND CONDITIONS and any changes authorized by the City Council or law will apply to the sale of electric service under the established rate or rates authorized by the City Council and currently applicable at time of sale.

1. GENERAL

- 1.1 Electric service will be supplied in accordance with these Terms and Conditions and any changes required by the City or law, and such applicable rate or rates as may from time to time be authorized by the City. However, in the case of a Customer whose service requirements are of unusual size or characteristics, additional or special rate and contract arrangements may be required.
- 1.2 These Terms and Conditions shall be considered a part of all of the City rate schedules, except where specifically changed by written agreement by the City.
- 1.3 In case of conflict between any provision of a rate schedule and the Terms and Conditions, the provisions of the rate schedule shall apply.
- 1.4 The failure of the City to insist upon strict performance of any of the provisions in the Terms and Conditions, or to exercise any of the rights or remedies provided in the Terms and Conditions, or any delay in the exercise of any of the rights or remedies, shall not release the Customer from any responsibilities or obligations imposed by Law or by the Terms and Conditions, and shall not be deemed a waiver of any right of the City to insist upon strict performance of the Terms and Conditions.

2. ESTABLISHMENT OF SERVICE

- 2.1 Application for Service - Customer requesting electric service may be required to appear at City's place of business to produce proof of identity and sign City's standard form of application for service or a contract before service is supplied by City.
 - 2.1.1 In the absence of a signed application or contract for service the supplying of electric service by the City and acceptance thereof by Customer shall be deemed to constitute a service agreement by and between the City and Customer for delivery, acceptance of and payment for service, subject to City's applicable rates and rules and regulations.
 - 2.1.2 Where service is requested by two or more individuals, City shall have the right to collect the full amount owed City from any one of the applicants.
- 2.2 Service Establishment Charge - A service establishment charge of \$12.50 for residential and nonresidential electric service will be assessed each time City is requested to establish, reconnect or reestablish electric service to Customer's delivery point. Billing for the service establishment charge may be rendered as a part of the Customer's first bill.
 - 2.2.1 Customer will be required to pay the above appropriate service establishment charge and an after-hours charge of \$50.00, should Customer request service be established during a period other than regular working hours.
- 2.3 Grounds For Refusal Of Service - City may refuse to establish or reestablish service if any of the following conditions exist:
 - 2.3.1 Applicant has an outstanding amount due with the City and is unwilling to make payment.
 - 2.3.2 A condition exists which in City's judgment is unsafe or hazardous.
 - 2.3.3 Applicant has failed to make the security deposit requirements set forth by City as specified under 2.6
 - 2.3.4 Applicant is known to be in violation of City's rate schedule.

- 2.3.5 Applicant fails to furnish to City funds, service entrance equipment, and/or right-of-way required to serve Applicant and which have been specified as a condition for providing service.
- 2.3.6 Applicant falsifies his or her identity for the purpose of obtaining service.
- 2.3.7 Service is already being provided at the address for which Applicant is requesting service.
- 2.3.8 ~~Service in the name of another Customer currently living with the applicant at the same address for which service is being requested has been terminated for nonpayment and a delinquent balance is still outstanding.~~
- 2.3.9 Prior Customer was terminated for any of the below reasons and continues to reside on the premises for which applicant requests service.
- a). City has evidence of meter tampering or fraud.
 - b). Failure to pay a delinquent bill for utility service.
 - c). Failure to maintain deposit requirements.
 - d). Failure to pay for a bill to correct a previous underbilling.
 - e). Failure to comply with curtailment procedures imposed by the City during supply shortages.
 - f). Failure to provide reasonable and safe access to City's equipment and property.
 - g). Breach of written contract between City and Customer.
- 2.3.10 Applicant has failed to obtain all required permits and/or inspections indicating that Applicant's facilities comply with local construction and safety codes.

2.4 Establishment of Residential Credit or Security Deposit

- 2.4.1 Residential Establishment of Credit - City shall not require a security deposit from a new Applicant for residential electric service if Applicant is able to meet any of the following requirements:
- 2.4.1.1 Applicant has had service of a comparable nature with City at another service location within past two (2) years and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has not had an unpaid final bill.
 - 2.4.1.2 Applicant can provide a letter regarding credit or verification from an electric utility where service of a comparable nature was received within the last two years, and the letter states that the Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.
 - 2.4.1.3 Applicant provides a guarantor, satisfactory to the City, to secure payment of bills for the service being requested.
- 2.4.2 Residential Establishment of Security Deposit - When credit cannot be established as provided for in Section 2.4.1 hereof or when it is determined that Applicant left an unpaid final bill owing to another utility, Applicant may be required to place a cash deposit to secure payment of bills for service.

2.5 Establishment of Nonresidential Credit or Security Deposit

- 2.5.1 Nonresidential Establishment of Credit - City shall not require a security deposit from a new Applicant for Nonresidential electric service if Applicant is able to meet any of the following requirements:
- 2.5.1.1 Applicant has had service for at least one year of a comparable nature with City at another service location within the past two years, and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has had an unpaid final bill.
 - 2.5.1.2 Applicant can provide a letter regarding credit or verification from an electric utility where service of a comparable nature was last received which states Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.

2.5.2 Nonresidential Establishment of Security Deposit - All nonresidential customers may be required to:

- 2.5.2.1 Place a cash deposit to secure the payment of bills for service as prescribed herein, or
- 2.5.2.2 Provide a noncash security deposit in the form of a Surety Bond, Irrevocable Letter of Credit or Assignment of Moneys in an amount equal to the required security deposit.

2.6 Re-establishment of Security Deposit

- 2.6.1 Residential - City may require a residential Customer to establish or reestablish a security deposit if Customer becomes delinquent or if the customer has been disconnected for nonpayment during the last twelve (12) months, or when Customer's financial condition may jeopardize the payment of their bill as determined by a bankruptcy filing.
- 2.6.2 Nonresidential - City may require a nonresidential Customer to establish or reestablish a security deposit if the Customer becomes delinquent or if the Customer has been disconnected for nonpayment during the last twelve (12) months, or when the Customer's financial condition may jeopardize the payment of their bill, as determined by a credit investigation, financial reorganization notice or bankruptcy filing.

2.7 Security Deposits

- 2.7.1 Residential security deposits must be a cash deposit, and may be the Customer's highest monthly bill as estimated by the City, or a minimum of \$100 whichever amount is greater.
 - 2.7.1.1 Deposits will automatically be refunded after 12 months of service provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless Customer has filed bankruptcy.
- 2.7.2 Nonresidential security deposits may be either cash or noncash, as described in 2.7.2.1, and shall not exceed two (2) times Customer's estimated average monthly billing.
 - 2.7.2.1 Deposits and noncash deposits on file with the City will be reviewed after twenty-four (24) months of service and will be refunded or released provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless the Customer's financial condition warrants extension of the security deposit. Deposits not returned within the first twenty four month period, shall be reviewed annually to determine if Customer qualifies for return of the deposit.
- 2.7.3 City reserves the right to increase or decrease the security deposit amount when the Customer's average consumption changes by more than ten (10) percent for residential accounts within a twelve (12) consecutive month period and five (5) percent for nonresidential accounts within a twelve (12) consecutive month period. Separate security deposits may be required for each location.
- 2.7.4 Customer security deposits shall not preclude City from terminating agreement for service or suspending service for any failure in the performance of Customer obligation under the agreement for service.
- 2.7.5 Cash deposits held by the City shall not earn interest. Deposits on inactive accounts may be applied to the final bill and the balance if any, will be refunded to the Customer of record within sixty (60) days.
- 2.7.6 If Customer terminates service with City, the security deposit may be credited to Customer's final bill.

2.8 Line Extensions - Installations requiring the City to extend its facilities in order to establish service will be made in accordance with City's Conditions Governing Extensions of Electric Distribution Lines and Services.

3. RATES

- 3.1 Rate Information - City shall provide a copy of the rate schedule to the Customer, when requested. In addition, City shall notify Customers of any change in rate schedules affecting those Customers.

3.2 Rate Selection - Customer's service characteristics and service requirements determine the selection of the applicable rate schedule. City will use reasonable care in initially establishing service to the Customer under the most advantageous rate schedule applicable to the Customer. However, because of varying Customer usage patterns and other reasons, City cannot guarantee that the most economic applicable rate will be applied. City will not make any refunds in any instances where it is determined that Customer would have paid less for service had Customer been billed on an alternate applicable rate or provision of a rate.

3.3 Optional Rates - Certain optional rate schedules applicable to certain classes of service allow the Customer the option to select an alternative rate schedule to be effective initially or after service has been established. Customer desiring service under an alternative rate schedule after service has been established must make such request in writing to the City. Billing under the alternate rate will become effective from or after the next meter reading. No further changes, however, may be made within the succeeding twelve (12) month period. Where the rate schedule or contract pursuant to which Customer is provided service specifies a term, Customer may not exercise its option to select another alternate rate schedule until expiration of the term.

4. BILLING AND COLLECTION

4.1 Customer Service Installation and Billing - Service billing periods normally consist of approximately 30 days unless designated otherwise under the rate schedules or at City option.

4.1.1 Customer service installations will normally be arranged to accept only one type of standard service at one point of delivery to enable service measurement through one meter. If Customer requires more than one type of service, or total service cannot be measured through one meter according to City's normal practice, separate meters will be used and separate billing rendered for the service measured by each meter.

4.1.2 The City normally meters and bills each premise separately; however, adjacent and contiguous premises not separated by private or public property or right-of-way and operated as one integral unit under the same name and as a part of the same business, will be considered a single premise.

4.1.3 When regular, accurate meter readings are not available or the electric usage has not been accurately measured, the City may estimate the Customer's energy usage for billing purposes on the basis of information including, but not limited to, the physical condition of the metering equipment, available meter readings, records of historical use, and general characteristics of the Customer's load and operation.

4.1.4 Where a meter error is discovered as a result of a meter test, the City may render an adjusted bill to the Customer for the amount of the undercharge, and shall issue a refund or credit to the Customer's account for the amount of the overcharge. Such adjusted bill shall be computed as follows:

4.1.4.1 Fast Meter: If a meter is registering more than 2% fast, the City shall refund to the Customer the amount of the overcharge based on the corrected meter readings or the utility's estimate of the energy usage either for the known period of the meter error or, if the period of error is not known, for the period during which the meter was in use, in either situation for a period not exceeding one year.

4.1.4.2 Slow Meter: If a meter for residential service is registering more than 25% slow, or a meter for any other class of service is registering more than 2% slow, the City may bill the Customer for the amount of the undercharge based on corrected meter readings or the City's estimate of the energy usage either for the known period of meter error or, if the period of the meter error is not known, for the period the meter was in use, in either situation the billing shall not exceed three months for residential service and one year for any other class of service.

4.1.4.3 Nonregistering Meter: If a meter is found to be nonregistering, the City may bill the Customer for the amount of the underbillings based on the City's estimate of the electric service used but not registered, for a period not exceeding three months.

4.1.5 Adjustment of Bills for Billing Error

4.1.5.1 A billing error is an error by the City which results in incorrect billing charges to the Customer. Billing errors may include incorrect meter reads or clerical errors by a City representative such as applying the wrong rate, wrong billing factor or an incorrect calculation. Billing error does not include a meter error or unauthorized use, nor any error in billing resulting from the meter dial "pegging" or being over if caused by other than the City, switched or mismarked meters by other than the City, improper customer wiring, blown fuse in one energized conductor, inaccessible meter, failure of the customer to notify the City of changes in Customer's equipment or operation, or failure of the Customer to take advantage of a rate or condition of service which the Customer is eligible.

4.1.5.2 Where the City overcharges or undercharges a Customer as the result of a billing error, the City may render an adjusted bill for the amount of the undercharge, and shall issue a refund or credit to the Customer for the amount of the overcharge, for the period of the billing error, but not to exceed three years in the case of an overcharge, and, in the case of an undercharge not to exceed three months for residential service and one year for any other class of service.

4.2 Collection Policy - The following collection policy shall apply to all customer accounts:

4.2.1 All bills rendered by the City are due and payable no later than nineteen (19) days from the billing date. Any payment not received within this time frame shall be considered past due. Bills for which payment has not been received within fifteen (15) days of the past due date will be considered delinquent. All delinquent bills shall be subject to the provisions of the City's termination procedure. City reserves the right to suspend or terminate Customer's service for:

- a). nonpayment of delinquent service bills;
- b). nonpayment of service establishment charges;
- c). nonpayment of security deposits;
- d). nonpayment of meter test charges;
- e). nonpayment of returned check charges;
- f). nonpayment of late charges;
- g). nonpayment of collection charges;
- h). and/or to declare past due service bill amounts, past due service establishment charges, past due security deposits, past due meter test charges, past due returned check charges, and past due collection charges subject to a late charge at the rate of eighteen percent (18%) per annum.

4.2.2 If Customer has one or more utility services with City and one or more of such services is terminated for nonpayment and Customer is unwilling to make arrangements with City for payment, City shall be entitled to transfer the balance due on the terminated service(s) to any other active utility account of Customer. The failure of the Customer to pay the active account shall result in the suspension or termination of service thereunder. However residential electric service shall not be discontinued, because of nonpayment of other classes or types of electric service.

4.3 Responsibility for Payment of Bills - Customer is responsible for the payment of bills for energy use recorded by the meter or estimated by City, until service is ordered discontinued, and the City has had two (2) working days time to secure a final meter reading.

4.3.1 When an error is found to exist in the billing rendered to the Customer, City will correct such an error to recover or refund the difference between the original billing and the correct billing. Such adjusted billings will not be rendered for periods in excess of three years from the date the error is discovered. Any refunds to Customers resulting in adjusted billings will be made promptly upon discovery by City. Underbillings by City shall be billed to Customer who may be given up to one year to pay if the underbilling is less than one thousand dollars (\$1000.00), and up to three years to pay if underbilling is more than one thousand dollars (\$1000.00), without late payment penalties. If the account is billed on a special contract or non-metered rate, or service has been established but no bills have been rendered, Customer shall be limited to six months to pay underbillings for residential accounts and three months for nonresidential accounts.

4.4 Returned Checks - If City is notified by the Customer's bank that the bank will not honor a check tendered by Customer for payment of any bill, City may require the Customer to make payment in cash, by money order, certified check or other means which guarantee the Customer's payment to the City.

4.4.1 Customer shall be charged a fee of fifteen dollars (\$15.00) for each instance where Customer tenders payment of a bill with a check which is not honored by Customer's bank.

4.4.2 The tender of a dishonored check shall in no way:

- i) relieve Customer of the obligation to render payment to City under the original terms of the bill;
- ii) or, defer City's right to terminate service for nonpayment of bills.

4.5 Collection Charge - City may require payment of a Collection Charge of \$10.00 when an authorized City representative travels to Customer's premises to accept payment of a delinquent account, notify of service termination, make payment arrangements, or to disconnect service to a delinquent account.

- 4.5.1 If a termination is required at equipment other than the meter, a reconnection charge of \$50.00 must be paid prior to service re-establishment. The customer shall be billed the normal service establishment charge in addition to the above reconnect charge on the next month's billing.
- 4.5.2 To avoid discontinuation of service, Customer may make payment in full, including any necessary deposit in accordance with Section 2.5 or, at City option, may make acceptable payment arrangements.
- 4.6 Payment Assistance and Counseling - The City will provide the following services to Customers unable to pay their bills.
 - 4.6.1 The City will offer installment payment plans to allow Customers to amortize past due and current amounts over a reasonable period of time. Customers who default on installment payment plans may not qualify for future installment payment arrangements.
 - 4.6.2 Customer making payments on an installment payment plan must keep the account current as charges for service accrue.
 - 4.6.3 City will furnish Customer upon request, information on the availability of alternate sources of financial assistance.

5. SERVICE RESPONSIBILITIES OF CITY AND CUSTOMER

- 5.1 Responsibility: Use of Service or Apparatus - City and Customer assume all responsibility on their respective sides of the point of delivery for the electric service supplied and taken, as well as for any apparatus used in connection therewith.
 - 5.1.1 Customer and City each shall save the other harmless from and against all claims for injury or damage to persons or property occasioned by or in any way resulting from the electric service or the use thereof on their respective sides of the point of delivery. City shall, however, have the right to suspend or terminate service in the event City should learn of service use by Customer under hazardous conditions or for illegal purposes.
 - 5.1.2 Customer shall exercise all reasonable care to prevent loss or damage to City property installed on Customer's premise for the purpose of supplying service to Customer.
 - 5.1.3 Customer shall be responsible for payment of loss or damage to City property on Customer's premises arising from neglect, carelessness or misuse, and shall reimburse City for the cost of necessary repairs or replacements.
 - 5.1.4 Customer shall be responsible for payment for any equipment damage and/or estimated unmetered usage resulting from unauthorized breaking of seals, interfering, tampering or by-passing City's meter.
 - 5.1.5 Customer shall be responsible for notifying City of any failure in City's equipment.
- 5.2 Service Interruptions: Limitations on Liability of City - City shall not be liable to Customer for any damages occasioned by fluctuations, interruptions or curtailment of electric service except where caused by City's willful misconduct or gross negligence. City may, without incurring any liability therefore, suspend Customer's electric service for periods reasonably required to permit City to accomplish repairs to or changes in any of City's facilities.
 - 5.2.1 In the event of a national emergency or local disaster resulting in disruption of normal service, City may, in the public interest, interrupt service to other Customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal service to these agencies can be restored.
- 5.3 City Access to Customer Premises - City's authorized agents shall have safe access to Customer's premises at all reasonable hours to install, inspect, read, repair or remove its meters; to install, operate or maintain other City property, and to inspect and determine the connected electrical load. Neglect or refusal on the part of the Customer to provide such access shall be sufficient cause for discontinuance of service by City, and assurance of access may be required before service is restored.
- 5.4 Easements - All suitable easements and right-of-way required by the City for any portion of the extension which is on premises owned, leased or otherwise controlled by Customer shall be furnished in City's name by the Customer without cost to City and in reasonable time to meet proposed service requirements. All easements and right-of-way obtained on behalf of City shall contain such terms and conditions as are acceptable to the City.

- 5.5 Load Characteristics - Customer shall exercise reasonable care to assure that the electrical characteristics of its load, such as unusual short interval fluctuations in demand, shall not be such as to result in impairment of service to other customers or interference with operation of telephone, television or other communication facilities. The deviation from phase balance shall not be greater than ten percent (10%) at any time. The power factor of the load shall not be less than ninety percent (90%) lagging, but in no event leading, unless agreed to by City. In the event that Customer does not maintain such power factor, at the option of City, kva shall be substituted for kW in determining the applicable charge for billing purposes for each month in which such failure occurs.

6. METERING AND METERING EQUIPMENT

- 6.1 Customer Equipment - Customer shall install and maintain all wiring and equipment beyond the point of delivery. Except for City's meters and special equipment, Customer's entire installation must conform to all applicable construction standards and safety codes, and if an inspection or permit is required by law or by City, the same must be furnished by Customer.
- 6.1.1 Customer shall provide in accordance with City's current service standards, at no expense to City, and close to the point of delivery, a sufficient and suitable space acceptable to City's representative for the installation of City's metering equipment.
- 6.1.2 Customer shall provide and maintain a clear and unobstructed work space that extends a minimum radius of three (3) feet from the face of the electrical entrance section, and a clear and unobstructed walkway to the meter location of a minimum width of three feet. The electric entrance section work space shall have a level floor surface and a height minimum of 6 feet 6 inches to any overhead obstruction.
- 6.1.3 Customer shall, at his own expense, relocate meter or meters to a new and approved location whenever the existing meter or meters become inaccessible or work space cannot be maintained.
- 6.2 Service Connections - City will not install and maintain any lines and equipment on Customer's side of the point of delivery except its meter. For the mutual protection of the Customer and City, only authorized employees of City are permitted to make and energize the connection between the City's service wire and Customer's service entrance conductors. Such employees carry credentials which they will show upon request.
- 6.3 Measuring Customer Service - All the energy sold to the Customer will be measured by a commercially acceptable measuring device owned and maintained by the City, except where it is impractical to meter loads such as street lighting, security lighting, or special installations in which case the consumption may be calculated.
- 6.3.1 The readings of City's meters will be conclusive as to the amount of electric power supplied to Customer unless, there is evidence of meter tampering or energy diversion, or unless a test reveals City's meter is in error by more than plus or minus two percent (2%).
- 6.3.2 If there is evidence of meter tampering or energy diversion, Customer will be billed for the estimated energy consumption that would have been registered had all energy usage been properly metered.
- 6.3.3 If any meter after testing is found to be more than two percent (2%) in error, either fast or slow, proper correction shall be made of previous readings and an adjusted bill shall be rendered per 4.1.4. Customer will be billed for the estimated energy consumption that would have been registered had the meter been operating properly.
- 6.3.4 City shall, at the request of Customer, reread Customer's meter within ten (10) working days after such request by Customer. The cost of such rereads, which is \$10, may be charged to Customer, provided the original reading was not in error.
- 6.4 Meter Testing
- 6.4.1 City shall test its meters regularly in accordance with a meter testing and maintenance program.
- 6.4.2 City will individually test a meter upon Customer's request. If meter is found to be within the two percent (2%) limit, City may charge customer \$25.00 for the cost of the meter test. The results of the test will be furnished to the Customer within a reasonable time after the test.
- 6.4.3 Customer shall have the right to observe any individual meter test he has requested, or to have present an expert or other representative appointed by him.

6.5 Master Metering

- 6.5.1 Resale of Electricity - Customer shall not resale electricity from the City to any person except,
- where energy is purchased at rates specifically applicable to resale service, or
 - where the charge to the tenants is absorbed in the rental for the premises or space occupied, or
 - where the customer is owner, lessee or operator of an multi-family housing or similar facility, and submeters and resells electricity to tenants at the same rates and charges that the City would charge for the service if supplied by it directly, or
 - qualifies for submeter resale under the criteria identified in Section 6.5.4.
- 6.5.2 Mobile Home Parks - City shall refuse service to all new construction and/or expansion of existing permanent residential mobile home parks unless the construction and/or expansion is individually metered by the City.
- 6.5.3 Residential - Apartment Complexes - Condominiums and Other Multiunit Residential Buildings - City shall refuse service to all new construction of apartment complexes and condominiums which are master metered unless the building(s) will be served by a centralized heating, ventilation and/or air conditioning system and the contractor can provide to the City an analysis demonstrating that the central unit will result in a favorable cost/benefit relationship for the residents.
- 6.5.4 RV Parks, Marinas, Small Craft Harbors, and Similar Type Service - Master metering will be allowed at RV parks, marinas, small craft harbors and similar type of services. The master meter Customer may submeter individual spaces, slips or berths. An "extended stay" or permanent residential, commercial, recreational or similar facilities shall be individually metered by the City. Existing master metered facilities shall be exempt from these requirements, except for any new facilities that are added to the RV park, marina, small craft harbour, etc. after the effective date of these Terms and Conditions. The rates and charges to the submeter user must not exceed those that would be applied if user was purchasing electricity directly from the City.

7. TERMINATION OF SERVICE

- 7.1 Customer Initiated Termination - A Customer requesting termination of electric service must provide the City with at least two working days notice and a disconnect date. The Customer shall remain responsible for all energy use until two working days after the disconnect notice or the requested disconnect date, whichever is later.
- 7.2 Termination of Residential Service To Ill, Elderly or Handicapped Customers -
- 7.2.1 Residential Customers that are ill, elderly (over 65 years of age) or handicapped persons who have an inability to pay will not be terminated until all of the following have been attempted:
- The Customer has been made aware of the availability of funds from various governmental and social assistance agencies which the City is aware of.
 - City has made a diligent effort to notify a third party previously designated by the Customer.
 - City has attempted to make satisfactory payment arrangements with Customer and/or previously designated third party.
- 7.2.2 Residential service shall not be terminated where the Customer has an inability to pay and has established through medical documentation that, in the opinion of a licensed medical physician, termination would be especially dangerous to the Customer's or a permanent resident residing on the Customer's premises health, or where life support equipment used in the home is dependent upon electric service for operation.
- 7.2.3 A Customer utilizing the provisions of Section 7.2.2 shall be required to enter into a deferred payment agreement with the utility within ten (10) days after the scheduled termination date, or service may be terminated with two days notice.
- 7.3 With Notice - City may without liability for injury or damage disconnect service to any Customer for any of the reasons stated below, provided City has met the termination notification requirements.
- 7.3.1 The City may disconnect service after written notification for the following reasons:
- Customer violation of any City rate schedules.
 - Failure of Customer to pay a delinquent bill for service.
 - Failure of Customer to meet or maintain deposit requirements.
 - Failure of Customer to provide reasonable access to City's equipment and property.
 - Customer breach of contract for service between City and customer.
 - Failure of prior customer to pay a delinquent bill for service where the prior customer continues to reside on premises.

- When necessary for City to comply with an order of any Governmental agency having such jurisdiction.
- Customer fails to establish credit, after City, for Customer convenience, provided service before credit is established or continued service to a customer when credit was to be re-established.
- The City shall have the right to (but not the obligation) to remove any and all of its property installed on the Customer's premises upon termination of service.

7.3.2 Termination notice requirements.

- Fifteen day advance written notice of intent to terminate for nonpayment, which can be included or be a part of monthly billing notices.
- Five day advance written notice of intent to terminate for reasons other than nonpayment, which can be included or be a part of monthly billing notices.
- Two day advance written notice of intent to terminate for dishonored checks (NSF)
- Notice shall state reason for termination
- Notice shall be considered given to the Customer when a copy thereof is delivered to the service location or posted first class in the United States mail, addressed to the Customer's last known address.
- Service may be terminated on or after the day specified in the notice without giving further notice, if the violation has not been satisfied.
- Service may only be disconnected in conjunction with a personal visit to the premises by an authorized representative of the City.
- The City shall have the right (but not the obligation) to remove any and all of its property

7.4 Without Notice - City may without liability for injury or damage disconnect service to any Customer without notice under any of the following conditions.

- The existence of an obvious hazard to the health or safety of persons or property.
- City has evidence of meter tampering or fraud.
- Failure of Customer to comply with curtailment procedures imposed by City during a supply shortage.
- Failure of Customer to comply with the terms of any payment agreement or contract.
- City has evidence of unauthorized resale or use of electric services.
- The City shall have the right (but not the obligation) to remove any and all of its property

7.5 Restoration of Service - City shall not be required to restore service until the conditions which resulted in the termination have been corrected to the satisfaction of the City.

7.6 Master Meter Customers - When master metered accounts are being terminated with notice, the City will make a good faith effort to notify actual users prior to the termination. The notice may be posted in a common area of the complex or building, mailed to individual apartments, spaces or suites, or hand delivered. The notice shall provide the user the right to become a City customer without being required to pay the amount due on the account. However, any conversion of service entrance equipment required to accept City service will be the user's responsibility.

8. DISPUTED BILLS AND COMPLAINTS

8.1 Bill Inquiries and Complaint Investigation - A Customer may request a bill inquiry or complaint investigation by contacting the City's utilities office. An investigation will be completed by the City, and the Customer will be advised of the investigation's results and any action taken. If the Customer is seeking to set up an extended payment arrangement, the City will attempt to assist by offering an amortized payment schedule, and provided the Customer has not defaulted on a previous payment agreement.

8.2 Unresolved Bill Inquiries and Complaint Investigation - If a Customer is not satisfied with the investigation and/or action completed by the City's utilities office, the Customer should elevate the inquiry or complaint to the next level within the City staff, in the order recommended below.

- Utility Business Manager or Supervisor
- Public Utilities General Manager
- City Manager

8.3 Appeal To The Utility Board - A Customer who is not satisfied or believes the staff investigation results are incorrect or unfair, may appeal to the Needles Board of Public Utilities. The Board will hear only appeals that have not been resolved to the Customer's satisfaction, after the City Manager has finalized his review. A form to request an appeal is available at the utilities office, and must be submitted at least two weeks prior to a regularly scheduled Board meeting to ensure placement on the agenda. The Customer is encouraged to be present at the Board hearing, or to have a representative present.

8.4 Appeal To The City Council - A Customer who remains unsatisfied after appealing their concerns to the Needles Board of Public Utilities, may appeal to the City Council for final resolution. The City Clerk will assist the Customer with scheduling the appeal. The Customer or his representative must be present at the Council meeting for the appeal to be heard and/or acted upon.

8.5 Payment Of Disputed Bills - A Customer who has requested an investigation or who is appealing a determination shall not have the electric service disconnected for nonpayment of the disputed bill. If the Customer is disputing multiple months of billing, payment for one of the months being disputed may be withheld pending determination, but all remaining months being disputed must be paid to avoid being disconnected for nonpayment. A customer must pay subsequent bills to a disputed bill, to avoid being disconnected for nonpayment.

9. REMOVAL OF FACILITIES - Upon the termination of service, City may without liability for injury or damage, dismantle and remove its facilities installed for the purpose of supplying service to the Customer, and City shall be under no further obligation to serve Customer. If, however, City has not removed its facilities within one (1) year after termination of service, City shall thereafter give Customer thirty (30) days written notice before removing its facilities, or else waive any re-establishment charge within the next year for the same service to the same Customer at the same location.

For purpose of this Section, notice to the Customer shall be deemed given at the time such notice is deposited at the U.S. Postal Service, first class mail, postage prepaid, to the Customer at his/her last known address.

10. PROHIBITED SERVICE USES - Customer shall not use electric service for the following uses or activities. This prohibition is necessary to prevent electric shortages, and to avoid supplier penalties for excess demand requirements.

10.1 Outdoor Advertising Signs and Lighting

- 10.1.1 Illuminated billboards, signs, or similar advertising or identifying signs or equipment shall not be illuminated with City electric service during daylight hours.
- 10.1.2 Mechanized billboards, signs or similar advertising or identifying signs or equipment shall not be operated with City service during daylight hours.
- 10.1.3 A commercial/industrial Customer may, without restricted hours of use, illuminate with City service a time and temperature sign, and two business signs on its premises.

10.2 Decorative and Functional Outdoor Lighting

- 10.2.1 Outdoor lighting necessary for public safety, security, or required by law shall be exempt from the below restrictions. However, Customer shall minimize the number of lighting fixtures, and shall use energy efficient lighting for all outdoor lighting applications.
- 10.2.2 Commercial/Industrial Customer shall not operate any outdoor decorative, architectural or advertising "highlighting" or floodlighting, area, spot or other similar lighting during daylight hours.

10.3 Indoor Business Lighting

- 10.3.1 Indoor lighting necessary for public safety, security, or required by law shall be exempt from the below restrictions. However, Customer shall limit the number of fixtures used, and shall use energy efficient lighting for all indoor lighting.
- 10.3.2 Commercial/Industrial Customer shall reduce lighting levels to minimum required for security at all times building is not occupied.
- 10.3.3 Customer shall not operate window display lighting during daylight hours.

10.4 Electric Heating And Cooling

- 10.4.1 Businesses where temperatures exceeding the below recommendations are required for physician certified medical reasons, or by law, or whose principal business involves the preservation of perishable foods shall be exempt from the below restrictions.
- 10.4.2 Customer space conditioning equipment shall not be operated to provide refrigerated air conditioning below 78° F, when the residence or building is occupied, and 85° F, when the residence or building is unoccupied. Electric heat shall not be operated above 70° F when residence or building is occupied, and 60° F when the residence or building is unoccupied.

10.4.3 Commercial/Industrial Customer shall not use service for heating/cooling during non-business hours, unless the building is occupied, or Customer can establish, and the City agrees, that a net energy savings can be achieved by operating the space conditioning equipment during non-business hours.

10.4.4 Commercial/Industrial Customer shall not heat or cool unoccupied hotel, motel or similar guest accommodation facilities in vacant guest rooms.

10.4.5 Commercial/Industrial Customer whose building is equipped with a system that both heats and cools simultaneously, or that depends on electric lighting for total or partial heating shall operate the system to minimize electric energy use, and as close to the above guidelines as practical.

10.5 Swimming Pool/Spa Pumps And Filtration

10.5.1 Timers shall be installed on all swimming pool pumps and filtration equipment.

10.5.2 Customer shall set timer to between the hours of 9:00 p.m. and 9:00 a.m.

10.5.3 Customer may operate circulating pumps for solar pool heating equipment during daylight hours without restriction, except for the motor size limitations below.

Pool or Spa Sq. Ft. of Surface Area	Maximum Allowed Motor Size
520 or less	$\frac{3}{4}$ H.P.
521 - 800	1 H.P.
801 - 1200	$1\frac{1}{2}$ H.P.
Over 1201	Max. 1H.P./800 Sq.Ft.

10.6 Noncompliance - The City shall discontinue service to a Customer for noncompliance with the prohibited uses of electric energy, if after notice the customer does not correct the violation within five days. Service will not be reestablished until after Customer has complied.

10.7 Exemption Procedure - A Customer may request a special use exemption for a prohibited activity. The request must be in writing and shall be submitted to the Needles Board of Public Utilities. The request must explain why the exemption is being sought, the benefits the Customer will receive from such use, the approximate amount of energy required and the desired time period. Board approval must be received prior to Customer using service for a prohibited activity.

11. CURTAILMENT - When the availability of service is restricted and a reduction of service is required to maintain the integrity of part or the total electric system, the Customer will be notified by the City to reduce or terminate use of service. Such notifications may be made by mail, phone, or in-person. The City will curtail service on a proportionate basis, where possible, and will give service priority to customers and/or customer classes where health, safety and welfare will be adversely affected, when possible. Customers, who refuse or do not comply with curtailment requirements, may be terminated by the City. A service re-establishment charge of \$200.00 will be assessed for a first time violation, \$500.00 for second violation, and \$1000.00 for a third violation. A Customer who violates curtailment requirements more than three times will not be allowed to reestablish service.

12. SUCCESSORS AND ASSIGNS - Agreements for service shall be binding upon and for the benefit of the successors and assigns of Customer and City, but no assignments by Customer shall be effective until Customer's assignee agrees in writing to be bound and until such assignment is accepted in writing by the City.

13. WARRANTY - There are no understandings, agreements, representations or warranties, expressed or implied (including warranties regarding merchantability or fitness for a particular purpose), not specified herein concerning the sale and delivery of electricity by the City to the Customer. These Terms and Conditions state the entire obligation of the City in connection with such sales and deliveries.

NEEDLES PUBLIC UTILITY AUTHORITY

Will Serve Water and Wastewater Service

DATE: 9/15/22

TO: Riverlux Resort, Jeff West, Owner/Agent/Applicant (Applicant)

Project Site: Needles, CA

APN: 0185-058-15-0000, 0185-067-15-0000, 0660-301-13-0000, 0185-067-20-0000, 0185-109-48-0000, 0186-021-01-0000, 0185-067-08-0000

This Project is located in the City of Needles (City) and the service area of the Needles Public Utility Authority (NPUA). The NPUA will serve the above subject Project's water and wastewater requirements pursuant to the NPUA/City ordinances, rules and regulations, subject to the conditions of Project approval and the approved Project Site Plan, and the following terms, conditions and limitations:

- Water and Wastewater service will be provided to the Project through multiple service lines and a single connection to the building(s) on the Project Site, constructed in accordance with the approved Project Site Plan, the NPUA's requirements and connection, and all applicable codes and regulations. The full cost of the NPUA's installation of the required facilities shall be borne by the Applicant.
- The Applicant submitted tentative track no. 20478 with 60 lots which are a mix of residential and commercial lots. The following terms are added as a condition of the proposed development and must be provided prior to any develop on the stated above parcels;
 - a. The Applicant must identify and propose a phase development and install the entire underground water and wastewater infrastructure for each phase this must be presented and approved by the City/NPUA;
 - b. The proposed lift station must be installed prior to any wastewater connections and a maintenance and inspection plan must be submitted by Riverlux to the City/NPUA;
 - c. The Applicant must submit the water and wastewater drawings developed and stamped by a licensed Engineer and must be approved by City/NPUA prior to installation;
 - d. The designs must follow the connection points for wastewater and water as laid out in the tentative map (attached);
 - e. The Applicant has agreed that the water and wastewater service laterals, mains and lift station within the development will be owned and maintained by Riverlux Resort and not the responsibility of the City/NPUA;
 - f. Riverlux will allow the City/NPUA access to the property to read and/or replace water meters as per the terms and condition attached they are owned by the NPUA;

- g. All water and wastewater installations must be inspected and approved by the City/NPUA;
 - h. Each service will be required to pay for water capacity fees once before the meter is set which as of the date of this will serve is;
 - Residential \$1,548 + \$158 meter
 - Commercial \$1,700 + meter fee
 - Industrial \$2,550 + meter fee
 *Please note that these fees are subject to change
 - i. Each service will be required to pay for wastewater capacity fees once the site is connected to the system which as of the date of this will serve is;
 - All \$1,570 (applicant is responsible for lateral installation and material costs)
 *Please note that these fees are subject to change
 - j. The Applicants development is subject to the NPUA water and wastewater Terms and Conditions (attached)
- If it is determined that the requested water and wastewater service will require additional off-site system upgrades, NUPA/City may require oversizing of facilities, subject to the NPUA's/City's adopted regulations and terms for reimbursement as new development occurs.
 - To the extent additional public improvements or system upgrades are required for the Project, Applicant shall post a deposit for the estimated cost of line, lift station and other required infrastructure improvements, and the full estimated cost of improvements will be due prior to any equipment order and/or installation.
 - The NPUA reserves the right to increase water and wastewater rates and charges established pursuant to Proposition 26, and to amend its terms of service, and the Project will be subject to any increased or additional rates, charges and regulations implemented by the NPUA and applicable to similar facilities or uses, any limitations or restrictions placed on water and wastewater service by other state, federal or regulatory agencies, or due to unforeseen availability and/or the NPUA's ability to obtain or provide electricity for the Project. Changes in regulations may also require that the Project initiate conservation measures.
 - In accepting the terms of water and wastewater service provided herein, the Applicant agrees that the NPUA and the City shall be free from any liability to the Applicant, its successors in interest, or any other interested party, for damage to property, equipment or crops which may result from water conservation or power outages affecting the Project which are beyond the reasonable control of the NPUA and/or the City.
 - This Will Serve letter is conditioned on Applicant's compliance at all times with the NPUA/City Rules and Regulations for electric service and the Project conditions of approval.

This Will Serve water and wastewater service commitment runs with the parcels stated above and cannot be transferred or relocated to any other project or property without NPUA approval. If the Project is abandoned or discontinued or permits are revoked or

suspended, the electric service provided pursuant to this letter may be terminated and the electric capacity reallocated or redistributed to other properties and/or projects by the NPUA in its sole discretion.

Inspection and activation of the water and wastewater service connections will be scheduled by the City and the NPUA throughout construction up to and including issuance of the certificate of occupancy for the Project.

This Will Serve Water and Wastewater Service commitment is conditioned upon compliance with all applicable requirements of the City and the NPUA, payment in full of any required fees and deposits, and your agreement to comply with the foregoing conditions and limitations.

If you have any questions or need additional information regarding terms of NPUA water and wastewater service to your Project, please contact the undersigned at 760-326-5700.

Sincerely,



Rainie Torrance

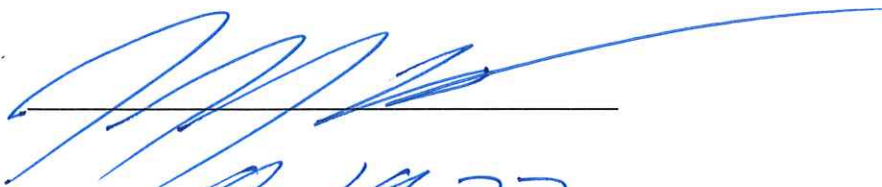
Assistant Utility Manager

rtorrance@cityofneedles.com

(760)326-5700 X140

CONSENT AND AGREEMENT:

The undersigned Owner/Agent/Applicant is the applicant/recipient of the related to the Project, and has reviewed, has full legal authority to and does understand and agree to the foregoing terms and conditions for connection and provision of electric service to the above-described Property and Project by the Needles Public Utility Authority and/or the City of Needles.


Dated: 9-19-22



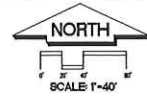
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TENTATIVE TRACT NO. 20478

IN THE CITY OF NEEDLES, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

BEING A PORTION OF REVENUE LOT 4 OF THE SEQUENTIAL 1/4 SECTION 28, TOWNSHIP 3 NORTH, RANGE 23 EAST, T13N, R23E, S44W, AND BEING A PORTION OF REVENUE LOT 5, TOWNSHIP 3 NORTH, RANGE 23 EAST, T13N, R23E, S44W, AND BEING A PORTION OF SECTION 28, TOWNSHIP 3 NORTH, RANGE 23 EAST, T13N, R23E, S44W, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL MAP THEREOF.

SHEET 1 OF 1 SHEETS



GENERAL NOTES

1. ALL UTILITIES TO BE SHOWN ON THIS MAP SHALL BE SHOWN IN ACCORDANCE WITH THE CITY OF NEEDLES, CALIFORNIA, UTILITIES DEPARTMENT, AND THE CITY OF NEEDLES, CALIFORNIA, PUBLIC WORKS DEPARTMENT.
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UTILITY SERVICES

1. WATER SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
2. WASTE SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
3. ELECTRIC SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
4. GAS SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
5. TELEPHONE SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
6. CABLE SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
7. POSTAL SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
8. RAILROAD SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
9. AIR SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.
10. MARINE SERVICE BY THE CITY OF NEEDLES, CALIFORNIA, 617 FARM STREET, NEEDLES, CA 92558, (760) 233-5700.

PREPARED FOR:

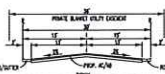
RIVERLUX RESORT
3001 SOUTH MAIN ROAD
NEEDLES, CA 92558
(760) 233-5700

PREPARED BY:

reab engineering
2101 HAWKINS STREET, SUITE 30
HAWTHORNE, CA 92546
(760) 233-5700

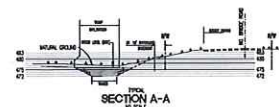
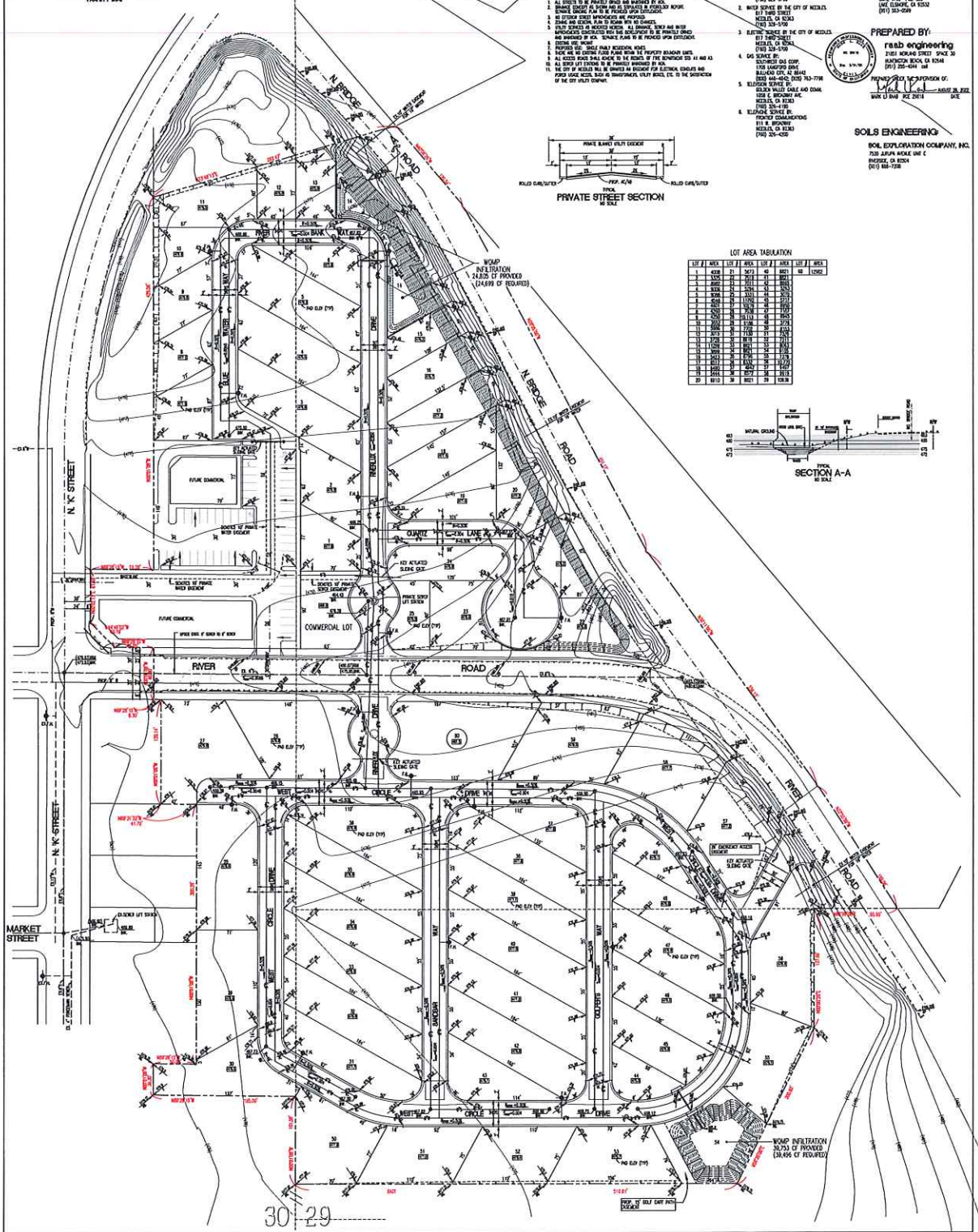
SOILS ENGINEERING:

SOIL EXPLORATION COMPANY, INC.
700 JUPITER WALK, SUITE C
HAWTHORNE, CA 92546
(760) 233-5700



LOT AREA TABULATION

LOT #	AREA	LOT #	AREA	LOT #	AREA	LOT #	AREA
1	1.00	11	1.00	21	1.00	31	1.00
2	1.00	12	1.00	22	1.00	32	1.00
3	1.00	13	1.00	23	1.00	33	1.00
4	1.00	14	1.00	24	1.00	34	1.00
5	1.00	15	1.00	25	1.00	35	1.00
6	1.00	16	1.00	26	1.00	36	1.00
7	1.00	17	1.00	27	1.00	37	1.00
8	1.00	18	1.00	28	1.00	38	1.00
9	1.00	19	1.00	29	1.00	39	1.00
10	1.00	20	1.00	30	1.00	40	1.00



30 29

ORDINANCE NO. 628-AC

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF NEEDLES AMENDING
AND RESTATING CHAPTER 22 OF THE NEEDLES MUNICIPAL CODE
REGARDING THE TERMS AND CONDITIONS FOR THE SALE OF WATER
SERVICES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NEEDLES, SAN BERNARDINO COUNTY, STATE OF CALIFORNIA AS FOLLOWS:

SECTION 1. CEQA. The City Council finds that the actions contemplated by this Ordinance are exempt from the California Environmental Quality Act ("CEQA") pursuant to 15061(b)(3), CEQA review is not required because there is no possibility that this Ordinance may have a significant effect upon the environment and the proposed text amendments constitute a minor alteration in a land use limitation under CEQA Guidelines Section 15305.

SECTION 2. Severability. The City Council hereby declares that if any provision, section, paragraph, sentence, or word of this Ordinance is rendered or declared to be invalid or unconstitutional by any final court action in a court of competent jurisdiction, or by reason of any preemptive legislation, such invalidity shall not affect the other provisions, sections, paragraphs, sentences, or words of this Ordinance, and to this end the provisions of this Ordinance are severable. The City Council declares that it would have adopted this Ordinance irrespective of the invalidity of any particular portion thereof and intends that the invalid portions should be severed and the balance of the Ordinance enforced.

SECTION 3. Prosecution of Prior Ordinances. Neither the adoption of this Ordinance nor the repeal of any other ordinance of this District shall in any manner affect the prosecution of any violation of any District ordinance or provision of the District ordinances, committed prior to the effective date hereof, nor be construed as a waiver of any penalty or the penal provisions applicable to any violation thereof.

SECTION 4. The City Council hereby amends and restates CHAPTER 22 OF THE NEEDLES MUNICIPAL CODE REGARDING THE TERMS AND CONDITIONS FOR THE SALE OF WATER SERVICES to read as attached hereto as **Exhibit "A"**.

SECTION 5. Effective Date and Publication. The Mayor shall sign and the City Clerk shall certify to the passage of this Ordinance and cause the same or a summary thereof to be published within 15 days after adoption in accordance with Government Code Section 36933. This Ordinance shall take effect 30 days after adoption in accordance with Government Code Section 36937.

NOW, THEREFORE, BE IT ORDAINED that the City Council of the City of Needles, California, approves of the amendment to the ordinance.

INTRODUCED AND READ for the first time and ordered posted at a regular meeting of the City Council of the City of Needles, California, held on the 25th day of February 2020, by the following roll call vote:

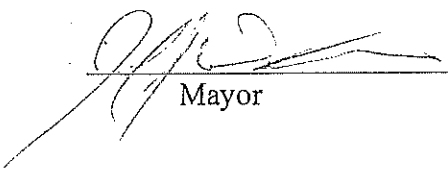
AYES: Council Members Gudmundson, Terral, Evans, Paget, Belt and Longacre

NOES	None
ABSENT	None
ABSTAIN	None

PASSED, APPROVED AND ADOPTED at a regular meeting of the City Council of the City of Needles, California, held on the 10th day of March 2020.

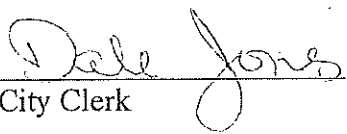
AYES: Council Members Gudmundson, Terral, Evans, Belt, and Longacre

NOES: None
ABSENT: Mayor Williams
ABSTAIN: None



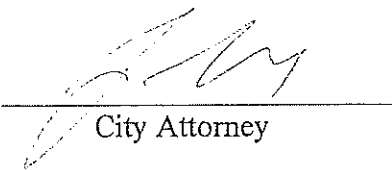
Mayor

Attest:



City Clerk

Approved as to form:



City Attorney

Exhibit A Attached

CITY OF NEEDLES
NEEDLES, CALIFORNIA

TERMS AND CONDITIONS FOR THE SALE OF WATER SERVICES

The following TERMS AND CONDITIONS and any changes authorized by the City Council or law will apply to the sale of water services within the City of Needles under the established rate or rates authorized by the City Council and currently applicable at time of sale.

1. GENERAL

1.1 Water service will be supplied in accordance with these Terms and Conditions and any changes required by the City or law, and such applicable rate or rates as may from time to time be authorized by the City. However, in the case of a Customer whose service requirements are of unusual size or characteristics, additional or special rate and contract arrangements may be required.

1.2 These Terms and Conditions shall be considered a part of all of the City water rate schedules, except where specifically changed by written agreement by the City.

1.3 In case of conflict between any provision of a rate schedule and the Terms and Conditions, the provisions of the rate schedule shall apply.

1.4 The failure of the City to insist upon strict performance of any of the provisions in the Terms and Conditions, or to exercise any of the rights or remedies provided in the Terms and Conditions, or any delay in the exercise of any of the rights or remedies, shall not release the Customer from any responsibilities or obligations imposed by Law or by the Terms and Conditions, and shall not be deemed a waiver of any right of the City to insist upon strict performance of the Terms and Conditions.

1.5 These Terms and Conditions have been amended to implement the requirements of SB 998 which adds Chapter 6 (commencing with Section 116900) to Part 12 of Division 104 of the Health and Safety Code, relating to water. The provisions of SB 998 to the extent in force and effect shall apply to the provision of water service by the City notwithstanding the absence of such provisions in these Terms and Conditions or anything to the contrary in these Terms and Conditions.

1.6 Definitions:

- (a) "Residential service" means water service to a residential connection that includes single-family residences, multifamily residences, mobilehomes, including, but not limited to, mobilehomes in mobilehome parks, or farmworker housing.

2. ESTABLISHMENT OF SERVICE

2.1 — Application for Service - Customer requesting water service may be required to appear at City's place of business to produce proof of identity and sign City's standard form of application for service or a contract before service is supplied by City.

2.1.1 In the absence of a signed application or contract for service the supplying of water service by the City and acceptance thereof by Customer shall be deemed to constitute a service agreement by and between the City and Customer for delivery, acceptance of and payment for service, subject to City's applicable rates and rules and regulations.

2.1.2 Where service is requested by two or more individuals, City shall have the right to collect the full amount owed City from any one of the applicants.

2.2 Service Establishment Charge - A service establishment charge of \$25.00 for residential and nonresidential water service will be assessed each time City is requested to establish, reconnect or reestablish water service to Customer. Billing for the service establishment charge may be rendered as a part of the Customer's first bill.

2.3 Grounds For Refusal Of Service - City may refuse to establish or reestablish service if any of the following conditions exist:

2.3.1 Applicant has an outstanding amount due with the City and is unwilling to make payment subject to Sections 8.2, 8.3, 8.4 and 8.5.

2.3.2 A condition exists which in City's judgment is unsafe or hazardous.

2.3.3 Applicant has failed to make the security deposit requirements set forth by City as specified under 2.4., 2.5 or 2.6.

2.3.4 Applicant is known to be in violation of City's rate schedule.

2.3.5 Applicant fails to furnish to City funds required to serve Applicant and which have been specified as a condition for providing service.

2.3.6 Applicant falsifies his or her identity for the purpose of obtaining service.

2.3.7 Service is already being provided at the address for which Applicant is requesting service.

2.3.8 Service in the name of another Customer currently living with the applicant at the same address for which service is being requested has been terminated for nonpayment and a delinquent balance is still outstanding.

2.3.9 Prior Customer was terminated for any of the below reasons and continues to reside on the premises for which applicant requests service.

- a). Failure to pay a delinquent bill for utility service.
- b). Failure to maintain deposit requirements.
- c). Failure to pay for a bill to correct a previous under billing.
- d). Failure to comply with curtailment procedures imposed by the City during service shortages.
- e). Failure to provide reasonable and safe access to City's equipment and property. Breach of written contract between City and Customer.

2.3.10 Applicant has failed to obtain all required permits and/or inspections indicating that Applicant's facilities comply with local construction and safety codes.

2.4 Establishment of Residential Credit or Security Deposit

2.4.1 Residential Establishment of Credit - City may not require a security deposit from a new Applicant for residential water service if Applicant is able to meet any of the following requirements:

2.4.1.1 Applicant has had service of a comparable nature with City at another service location within past two (2) years and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has not had an unpaid final bill.

2.4.1.2 Applicant can provide a letter regarding credit or verification from a utility where service of a comparable nature was received within the last two years, and the letter states that the Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.

2.4.1.3 Applicant provides a guarantor, satisfactory to the City, to secure payment of bills for the service when requested.

2.4.2 Residential Establishment of Security Deposit - When credit cannot be established as provided for in Section 2.4.1 hereof or when it is determined that Applicant left an unpaid final bill owing to another utility, Applicant may be required to place a cash deposit to secure payment of bills for service.

2.5 Establishment of Nonresidential Credit or Security Deposit

2.5.1 Nonresidential Establishment of Credit - City may not require a security deposit from a new Applicant for Nonresidential water service, if Applicant is able to meet any of the following requirements:

2.5.1.1 Applicant has had service for at least one year of a comparable nature with City at another service location within the past two years, and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has not had an unpaid final bill.

2.5.1.2 Applicant can provide a letter regarding credit or verification from a utility where service of a comparable nature was last received which states Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.

2.5.2 Nonresidential Establishment of Security Deposit - Except as provided in §2.5.1, all nonresidential Applicants may be required to:

2.5.2.1 Place a cash deposit to secure the payment of bills for service as prescribed herein, or

2.5.2.2 Provide a noncash security deposit in the form of a Surety Bond, Irrevocable Letter of Credit or Assignment of Moneys in an amount equal to the required security deposit.

2.6 Re-establishment of Security Deposit

2.6.1 Residential - City may require a residential Customer to establish or reestablish a security deposit if Customer becomes delinquent or if the customer has been disconnected for nonpayment during the last twelve (12) months, or when Customer's financial condition may jeopardize the payment of their bill as determined by appropriate credit information.

2.6.2 Nonresidential - City may require a nonresidential Customer to establish or reestablish a security deposit if the Customer becomes delinquent or if the Customer has been disconnected for nonpayment during the last twelve (12) months, or when the Customer's financial condition may jeopardize the payment of their bill, as determined by a credit investigation, financial reorganization notice or bankruptcy filing.

2.7 Security Deposits

2.7.1 Residential security deposits must be a minimum cash deposit of one hundred dollars (\$100.00), or two times the combined estimated monthly billing for water, wastewater and solid waste collection services whichever is the greater.

2.7.1.1 Deposits will automatically be refunded after 12 months of service provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless Customer has filed bankruptcy.

2.7.2 Nonresidential security deposits may be either cash or noncash, as described in 2.7.2.1, and must be a minimum deposit of one hundred dollars (\$100.00), or two (2) times Customer's combined estimated monthly billing for water, wastewater and solid waste collection services.

2.7.2.1 Deposits and noncash deposits on file with the City will be reviewed after twenty-four (24) months of service and will be refunded or released provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless the Customer's financial condition warrants extension of the security deposit. Deposits not returned within the first twenty four month period, shall be reviewed annually to determine if Customer qualifies for return of the deposit

2.7.3 City reserves the right to increase or decrease the security deposit amount when the Customers rate for monthly charges changes by more than ten (10) percent. Separate security deposits may be required for each location.

2.7.4 Customer security deposits shall not preclude City from terminating agreement for service or suspending service for any failure in the performance of Customer obligation under the agreement for service.

- 2.7.5 Cash deposits held by the City shall not earn interest. Deposits on inactive accounts may be applied to the final bill and the balance if any, will be refunded to the Customer of record within sixty (60) days.
- 2.7.6 If Customer terminates service with City, the security deposit may be credited to Customer's final bill.

2.8 Facility Extensions - Installations requiring the City to extend its facilities in order to establish water service will be made in accordance with City's Conditions Governing Extensions of Water Services.

3. RATES

- 3.1 Rate Information - City shall provide a copy of the rate schedule to the Customer, when requested. In addition, City shall notify Customers of any change in rate schedules affecting those Customers.
- 3.2 Rate Selection - Customer's service characteristics and service requirements determine the selection of the applicable rate schedule. City will use reasonable care in initially establishing service to the Customer under the most advantageous rate schedule applicable to the Customer. However, City cannot guarantee that the most economic applicable rate will be applied. City will not make any refunds in any instances where it is determined that Customer would have paid less for service had Customer been billed on an alternate applicable rate or provision of a rate.

4. BILLING AND COLLECTION

4.1 Customer Billing

- 4.1.1 Customer service installations will normally be arranged to accept only one type of standard service at one Point of Delivery to enable service measurement through one meter. If Customer requires more than one type of service, or total service cannot be measured through one meter according to City's norm practice, separate meters will be used and separate billing rendered for the service measured by each meter.
- 4.1.2 The City normally meters and bills each premise separately, however, adjacent and contiguous premises not separated by private or public property or right-of-way and operated as one integral unit under the same name and as a part of the same business, will be considered a single premise.
- 4.1.3 When regular, accurate meter readings are not available or the water usage has not been accurately measured, the City may estimate the Customer's water usage for billing purposes on the basis of information including, but not limited to, the physical condition of the metering equipment, available meter readings, records of historical use, and general characteristics of the Customer's use and operation.
- 4.1.4 Where a meter error is discovered as a result of a meter test, the City may render an adjusted bill to the Customer for the amount of the undercharge, and shall issue a refund or credit to the Customer's account for the amount of the overcharge. Such adjusted bill shall be computed as follows:
- 4.1.4.1 Fast Meter: If a meter is registering more than 2% fast, the City shall refund to the homer the amount of the overcharge based on the corrected meter readings or the utility's estimate of the water usage either for the known period of the meter error or, if the period of error is not known, for the period during which the meter was in use, in either situation for a period not exceeding one year.
- 4.1.4.2 Slow Meter: If a meter for residential service is registering more than 25% slow, or a meter for any other class of service is registering more than 2% slow, the City may bill the Customer for the amount of the undercharge based on corrected meter readings or the City's estimate of the water usage either for the known period of meter error or, if the period of the meter error is not known, for the period the meter was in use, in either situation the billing shall not exceed three months for residential service and one year for any other class of service.
- 4.1.4.3 Nonregistering Meter: If a meter is found to be nonregistering, the City may bill the Customer for the amount of the underbillings based on the City's estimate of the water service used but not registered, for a period not exceeding three months.
- 4.1.5 Water service bills will be rendered in combination with wastewater bills when the premise(s) is connected to the City's wastewater treatment and collection system.
- 4.1.6 Customer's receiving a combination water/wastewater/solid waste service bill may not pay the services separately.

4.1.2 Adjustment of Bills for Billing Error

- 4.1.2.1 A billing error is an error by the City which results in incorrect billing charges to the Customer. Billing errors may include clerical errors by a City representative such as applying the wrong rate, wrong billing factor or an incorrect calculation. Billing error does not include unauthorized use, failure of the customer to notify the City of changes in operation, or failure of the Customer to take advantage of a rate or condition of service which the Customer is
- 4.1.2.2 Where the City overcharges or undercharges a Customer as the result of a billing error, the City may render an adjusted bill for the amount of the undercharge, and shall issue a refund or credit to the Customer for the amount of the overcharge, for the period of the billing error, but not to exceed three years in the case of an overcharge, and, in the case of an undercharge not to exceed three months for residential service and one year for any other class of service.
- 4.2 **Collection Policy** - It is the policy of the City to discontinue water service to Customers by reason of nonpayment of bills only after notice and a meaningful opportunity to be heard on disputed bills. Residential service may only be disconnected in accordance with Sections 8.2, 8.3, 8.4 and 8.5. The City's application for service and all bills shall contain an address and phone number where Customers may direct billing concerns.
- 4.2.1 All bills rendered by the City are due and payable no later than nineteen (19) days from the billing date. Any payment not received within this time frame shall be considered past due and delinquent. All delinquent bills shall be subject to the provisions of the City's termination procedure. City reserves the right to suspend or terminate Customer's service for:
- a). nonpayment of delinquent service bills;
 - b). nonpayment of service establishment charges;
 - c). nonpayment of security deposits;
 - d). nonpayment of returned check charges;
 - e). nonpayment of late charges;
 - f). nonpayment of collection charges;
 - g). and/or to declare past due service bill amounts, past due service establishment charges, past due security deposits, past due returned check charges, and past due collection charges subject to a late charge at the rate of eighteen percent (18%) per annum.
- 4.2.2 If Customer has one or more utility services with City and one or more of such services are terminated for nonpayment and Customer is-unwilling to make arrangements with City for payment, City shall be entitled to transfer the balance due on the terminated service(s) to any other active utility account of Customer. The failure of the Customer to pay the active account shall result in the suspension or termination of service thereunder. However residential water service shall not be discontinued, because of nonpayment of other classes or types of water service.
- 4.3 **Responsibility for Payment of Bills.**
- 4.3.1 Customer is responsible for the payment of bills for water service until service is ordered discontinued, and the City has had two (2) working days' time to process request.
- 4.3.2 Any water service charge remaining unpaid after notice and an opportunity to be heard shall become a lien upon such premises. Failure of any Customer billed or the owner of a premise to pay any water service charge prior to delinquency, may result in the City taking steps authorized by law to enforce payment of such lien.
- 4.3.3 When an error is found to exist in the billing rendered to the Customer, City will correct such an error to recover or refund the difference between the original billing and the correct billing. Such adjusted billings will not be rendered for periods in excess of three years from the date the error is discovered. Any refunds to Customers resulting in adjusted billings will be made promptly upon discovery by City. Under billings by City shall be billed to Customer who may be given up to one year to pay if the under billing is less than one thousand dollars (\$1000.00), and up to three years to pay if under billing is more than one thousand dollars (\$1000.00), without late payment penalties. If the account is billed on a special contract, or service has been established but no bills have been rendered, Customer shall be limited to six months to pay under billings for residential accounts and three months for nonresidential accounts.
- 4.4 **Returned Checks** - If City is notified by the Customer's bank that the bank will not honor a check tendered by Customer for payment of any bill, City may require the Customer to make payment in cash, by money order, certified check or other means which guarantee the Customer's payment to the City.

- 4.4.1 Customer shall be charged a fee of fifteen dollars (\$15.00) for each instance where Customer tenders payment of a bill with a check which is not honored by Customer's bank. Only one fifteen dollar (\$15.00) fee shall be charged for each instance when a customer has a check which was dishonored for both the City wastewater and water service payment.
- 4.4.2 The tender of a dishonored check shall in no way:
- i) relieve Customer of the obligation to render payment to City under the original terms of the bill;
 - ii) or, defer City's right to terminate service for nonpayment of bills.
- 4.5 To avoid discontinuation of service, Customer may make payment in full, including any necessary deposit in accordance with Section 2.5 or, may make acceptable payment Arrangements as provided in Section 8.4.
- 4.6 Payment Assistance and Counseling - The City will provide the following services to Customers unable to pay their bills.
- 4.6.1 The City will offer installment payment plans to allow Customers to amortize past due and current amounts over a reasonable period of time. Customers who default on installment payment plans may not qualify for future installment payment arrangements.
- 4.6.2 Customer making payments on an installment payment plan must keep the account current as charges for service accrue.
- 4.6.3 City will furnish Customer upon request, information on the availability of alternate sources of financial assistance.

5 SERVICE RESPONSIBILITIES OF CITY AND CUSTOMER

5.1 Responsibility: Use of Service or Apparatus - City and Customer assume all responsibility on their respective sides of the Point of Delivery for water service supplied and taken, as well as for any apparatus used in connection therewith. The Point of Delivery shall be where the Customer's piping connects to the City water meter equipment.

- 5.1.1 Customer and City each shall save the other harmless from and against all claims for injury or damage to persons or property occasioned by or in any way resulting from the water service or the use thereof on their respective sides of the Point of Delivery. City shall, however, have the right to suspend or terminate service in the event City should learn of service use by Customer under hazardous conditions or for illegal purposes.
- 5.1.2 Customer shall exercise all reasonable care to prevent loss or damage to City property installed on Customer's premise for the purpose of supplying service to Customer.
- 5.1.3 Customer shall be responsible for payment of loss or damage to City property on Customer's premises arising from neglect, carelessness or misuse, and shall reimburse City for the cost of necessary repairs or replacements.
- 5.1.4 Customer shall be responsible for payment for any equipment damage and/or estimated unmetered usage resulting from unauthorized interfering, tampering or by-passing City's meter.
- 5.1.5 Customer shall be responsible for notifying City of any failure in City's equipment.

5.2 Service Interruptions: Limitations on Liability of City - City shall not be liable to Customer for any damages occasioned by fluctuations, interruptions or curtailment of water service except where caused by City's willful misconduct or gross negligence. City may, without incurring any liability therefore, suspend Customer's water service for periods reasonably required to permit City to accomplish repairs to or changes in any of City's facilities.

- 5.2.1 In the event of a national emergency or local disaster resulting in disruption of normal service, City may, in the public interest, interrupt service to other Customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal service to these agencies can be restored.

5.3 City Access to Customer Premises - City's authorized agents shall have safe access to Customer's premises at all reasonable hours to install, inspect, read, repair or remove its meters; to install, operate or maintain other City property, and to inspect and determine the connected water use. Neglect or refusal on the part of the Customer to provide such access shall be sufficient cause for discontinuance of service by City, and assurance of access may be required before service is restored.

- 5.4 Easements - All suitable easements and right-of-way required by the City for any portion of the extension which is on premises owned, leased or otherwise controlled by Customer shall be furnished in City's name by the Customer without cost to City and in reasonable time to meet proposed service requirements. All easements and right-of-way obtained on or of City shall contain such terms and conditions as are acceptable to the City.

6. METERING AND METERING EQUIPMENT.

- 6.1 Customer Equipment - Customer shall install and maintain all water distribution equipment beyond the Point of Delivery. Except for City's meters and special equipment, Customer's entire installation must conform to all applicable construction and health standards and safety codes, and if an inspection or permit is required by law or by City, the same must be furnished by Customer.
- 6.1.1 Customer shall provide in accordance with City's current service standards, at no expense to City, and close to the Point of Delivery, a sufficient and suitable space acceptable to City's representative for the installation of City's metering equipment.
- 6.1.2 Customer shall provide and maintain a clear and unobstructed work space that extends a minimum radius of three (3) feet from the face of the water meter enclosure, and a clear and unobstructed walkway to the meter location of a minimum width of three feet. The water meter enclosure work space shall have a level surface and a minimum clearance of 6 feet 6 inches to any overhead obstruction.
- 6.1.3 Customer shall, at his own expense, relocate meter or meters to a new and approved location whenever the existing meter or meters become inaccessible or work space cannot be maintained.
- 6.2 Service Connections
- 6.2.1 City will not install nor maintain any piping and equipment on Customer's side of the Point of Delivery.
- 6.2.2 For the mutual protection of the Customer and City, only authorized employees of City are permitted to turn on or turn off the water service from any building or premise, or to connect or disconnect the water meter between the City's water distribution system and Customer's water distribution system. Such employees carry credentials which they will show upon request.
- 6.2.3 Customer shall not tap, cut or move any City water system equipment unless written permission to do so has been granted by the City Manager or his representative.
- 6.2.4 If City finds a premise turnoff valve that is damaged or broken because of tampering or improper operation by Customer, the City may replace the valve and install a gate valve on the Customer's side of the meter. The cost of both valves and labor will be billed to the Customer.
- 6.3 Measuring Customer Service - All the water sold to the Customer will be measured by a commercially acceptable measuring device owned and maintained by the City.
- 6.3.1 The readings of City's meters will be conclusive as to the amount of water used by the Customer unless, there is evidence of meter tampering or water diversion, or unless a test reveals City's meter is in error by more than plus or minus two percent (2%).
- 6.3.2 If there is evidence of meter tampering or water diversion, Customer will be billed for the estimated water used that would have been registered had all water usage been properly metered.
- 6.3.3 If any meter after testing is found to be more than two percent (2%) in error, either fast or slow, proper correction shall be made of previous readings and an adjusted bill shall be rendered per 4.1.4. Customer will be billed for the estimated water usage that would have been registered had the meter been operating properly.
- 6.3.4 City shall, at the request of Customer, reread Customer's meter within ten (10) working days after such request by Customer. The cost of such rereads, which is \$10, may be charged to Customer, provided the original reading was not in error.
- 6.4 Meter Testing
- 6.4.1 City shall test its meters regularly in accordance with a meter testing and maintenance program.
- 6.4.2 City will individually test a meter upon Customer's request. If meter is found to be within the two percent (2%) limit, City may charge customer \$25.00 for the cost of the meter test. The results of the test will be furnished to the Customer within a reasonable time after the test.
- 6.4.3 Customer shall have the right to observe any individual meter test he has requested, or to have present an expert or other representative appointed by him.
- 6.5 Master Metering
- 6.5.1 Resale of Water - Customer shall not resell water from the City to any person except,
- i). where water is purchased at rates specifically applicable to resale service, or

- ii). where the charge to the tenants is absorbed in the rental for the premises or space occupied, or
 - iii). where the customer is owner, lessee or operator of an multi-family housing or similar facility, and submeters and resells water to tenants at the same rates and charges that the City would charge for the service if supplied by it directly, or
 - iv). qualifies for submeter resale under the criteria identified in Section 6.5.4.
- 6.5.2 Mobile Home Parks - Master metering may be allowed for new construction of residential mobile home parks, provided water service is included as part of the basic rent payment.
- 6.5.3 Residential - Apartment Complexes - Condominiums and Other Multiunit Residential Buildings - Master metering may be allowed for new construction of apartment complexes, provided water service is included as part of the basic rent payment. City shall refuse service to all new construction of condominiums, unless the condominiums are individually metered.
- 6.5.4 RV Parks, Marinas, Small Craft Harbors, and Similar Type Service - Master metering will be allowed at RV parks, marinas, small craft harbors and similar type of services. The master meter Customer may submeter individual spaces, slips or berths. An "extended stay" or permanent residential, commercial, recreational or similar facilities shall be individually metered by the City. Existing master metered facilities shall be exempt from these requirements, except for any new facilities that are added to the RV park, marina, small craft harbor, etc. after the effective date of these Terms and Conditions. The rates and charges to the submeter user must not exceed those that would be applied if user was purchasing water directly from the City.

7. SERVICE CONNECTIONS

Customer shall install and maintain all premise water connections. The City shall maintain the interconnection of the Customer's distribution system to the water meter. Such installations shall comply with requirements of the City's Conditions Governing Extensions of Water Service.

8. TERMINATION OF SERVICE

- 8.1 Customer Initiated Termination - A Customer requesting termination of water service must provide the City with at least two working days' notice and a disconnect date. The Customer shall remain responsible for all service use until two working days after the disconnect notice or the requested disconnect date, whichever is later.
- 8.2 Termination Policies. (a) The City shall make available its policies on discontinuation of residential service for nonpayment available in English, the languages listed in Section 1632 of the California Civil Code, and any other language spoken by at least 10 percent of the people residing in the City's service area. The policies are set forth in these Terms and Conditions are intended to cover the following subjects and may be interpreted or supplemented by additional written policies established by the City Manager or his or her designee:
- (1) A plan for deferred or reduced payments.
 - (2) Alternative payment schedules.
 - (3) A formal mechanism for a customer to contest or appeal a bill.
 - (4) A telephone number for a customer to contact to discuss options for averting discontinuation of residential service for nonpayment.
- (b) These policies shall be available on the City's Internet Web site and shall be provided to customers in writing, upon request.
- 8.3 (a) Termination of Residential Service. Notwithstanding anything to the contrary, the City shall not discontinue residential service for nonpayment until a payment by a customer has been delinquent for at least sixty (60) days. Delinquency shall be measured from the due date as provided in the bill or the City's other policies. No less than seven business days before discontinuation of residential service for nonpayment, the City shall contact the customer named on the account by telephone or written notice.
- (b) Telephonic Contact. When the City contacts the customer named on the account by telephone pursuant to section 8.3(a), it shall offer to provide in writing to the customer the City's policy on discontinuation of residential service for nonpayment. The City shall offer to discuss options to avert discontinuation of residential service for nonpayment, including, but not limited to, alternative payment schedules, deferred payments, minimum payments, procedures for requesting amortization of the unpaid balance, and petition for bill review and appeal.

- (c) **Mailed Notice.** When the City contacts the customer named on the account by written notice pursuant to section 8.3(a), the written notice of payment delinquency and impending discontinuation shall be mailed to the customer of the residence to which the residential service is provided. If the customer's address is not the address of the property to which residential service is provided, the notice also shall be sent to the address of the property to which residential service is provided, addressed to "Occupant." The notice shall include, but is not limited to, all of the following information in a clear and legible format:
 - (i) The customer's name and address.
 - (ii) The amount of the delinquency.
 - (iii) The date by which payment or arrangement for payment is required in order to avoid discontinuation of residential service.
 - (iv) A description of the process to apply for an extension of time to pay the delinquent charges.
 - (v) A description of the procedure to petition for bill review and appeal.
 - (vi) A description of the procedure by which the customer may request a deferred, reduced, or alternative payment schedule, including an amortization of the delinquent residential service charges, consistent with the written policies provided pursuant to subdivision (a) of Section 8.2.
- (d) **Personal Contact.** If the City is unable to make contact with the customer or an adult occupying the residence by telephone, and written notice is returned through the mail as undeliverable, the City shall make a good faith effort to visit the residence and leave, or make other arrangements for placement in a conspicuous place of, a notice of imminent discontinuation of residential service for nonpayment and the City's policy for discontinuation of residential service for nonpayment.
- (e) **Stay Pending Appeal.** If an adult at the residence appeals the water bill to the City or any other administrative or legal body to which such an appeal may be lawfully taken, the City not discontinue residential service while the appeal is pending.

8.4 **Payment Alternatives.**

- (a) The City shall not discontinue residential service for nonpayment if all of the following conditions are met:
 - (1) The customer, or a tenant of the customer, submits to the City the certification of a primary care provider, that discontinuation of residential service will be life threatening to, or pose a serious threat to the health and safety of, a resident of the premises where residential service is provided.
 - (2) The customer is willing to enter into an amortization agreement, alternative payment schedule, or a plan for deferred or reduced payment, consistent with the written policies provided pursuant to Section 8.2, with respect to all delinquent charges.
- (b) If the conditions listed in section 8.4(a) are met, the City shall offer the customer one or more of the following options at the discretion of City provided that repayment shall occur within 12 months year:
 - (A) Amortization of the unpaid balance.
 - (B) Participation in an alternative payment schedule.
 - (C) A partial or full reduction of the unpaid balance financed without additional charges to other ratepayers.
 - (D) Temporary deferral of payment.
- (3) **Failure to Abide by Payment Terms.** Residential service may be discontinued no sooner than 5 business days after the City posts a final notice of intent to disconnect service in a prominent and conspicuous location at the property under either of the following circumstances:
 - (A) The customer fails to comply with an amortization agreement, an alternative payment schedule, or a deferral or reduction in payment plan for delinquent charges for 60 days or more.

(B) While undertaking an amortization agreement, an alternative payment schedule, or a deferral or reduction in payment plan for delinquent charges, the customer does not pay his or her current residential service charges for 60 days or more.

(C) If the City discontinues residential service for nonpayment it shall provide the customer with information on how to restore residential service.

8.5 Special Rules Applicable to Renters.

- (a) If the City furnishes individually metered residential service to residential occupants of a detached single-family dwelling, a multiunit residential structure, mobilehome park, or permanent residential structure in a labor camp, and the owner, manager, or operator of the dwelling, structure, or park is the customer of record, the City shall make every good faith effort to inform the residential occupants, by means of written notice, when the account is in arrears that service will be terminated at least ten (10) days prior to the termination. The written notice shall further inform the residential occupants that they have the right to become customers, to whom the service will then be billed, without being required to pay any amount which may be due on the delinquent account. The City is not required to make service available to the residential occupants unless each residential occupant agrees to the terms and conditions of service and meets the requirements of law and the City's rules and tariffs. However, if one or more of the residential occupants are willing and able to assume responsibility for the subsequent charges to the account to the satisfaction of the City or if there is a physical means legally available to the City of selectively terminating service to those residential occupants who have not met the requirements of the City's rules and tariffs, the City shall make service available to those residential occupants who have met those requirements. If prior service for a period of time is a condition for establishing credit with the City, residence and proof of prompt payment of rent or other credit obligation acceptable to the City for that period of time is a satisfactory equivalent.

- 8.6 **Restoration of Service** - City shall not be required to restore service until the conditions which resulted in the termination have been corrected to the satisfaction of the City. The City shall collect a reconnection of service fee for reconnection during normal operating hours at fifty dollars (\$50), but not to exceed the actual cost of reconnection if it is less. For the reconnection of residential service during nonoperational hours, the City shall set a reconnection of service fee at one hundred fifty dollars (\$150), but not to exceed the actual cost of reconnection if it is less.

9. **DISPUTED BILLS AND COMPLAINTS**

- 9.1 **Bill Inquiries and Complaint Investigations** - A Customer may request a bill inquiry or complaint investigation by contacting the City's utilities office. An investigation will be completed by the City, and the Customer will be advised of the investigation's results and any action taken. If the Customer is seeking to set up an extended payment arrangement, the City will attempt to assist by offering an amortized payment schedule, and provided the Customer has not defaulted on a previous payment agreement.

- 9.2 **Unresolved Bill Inquiries and Complaint Investigation** - If a Customer is not satisfied with the investigation and/or action completed by the City's utilities office, the Customer should elevate the inquiry or complaint to the next level within the City staff, in the order recommended below.

Utility Business Manager or Supervisor
Public Utilities General Manager
City Manager

- 9.3 **Appeal To The Utility Board** - A Customer who is not satisfied or believes the staff investigation results are incorrect or unfair, may appeal to the Needles Board of Public Utilities. The Board will hear only appeals that have not been resolved to the Customer's satisfaction, after the City Manager has finalized his review. A form to request an appeal is available at the utilities office, and must be submitted at least two weeks prior to a regularly scheduled Board meeting to ensure placement on the agenda. The Customer is encouraged to be present at the Board hearing, or to have a representative present.
- 9.4 **Appeal To The City Council** - A Customer who remains unsatisfied after appealing their concerns to the Needles Board of Public Utilities, may appeal to the City Council for final resolution. The City Clerk will assist the Customer with scheduling the appeal. The Customer or his representative must be present at the Council meeting for the appeal to be heard and/or acted upon.
- 9.5 **Payment Of Disputed Bills** - A Customer who has requested an investigation or who is appealing a determination shall not have the water service disconnected for nonpayment of the disputed bill. If the Customer is disputing multiple months of billing, payment for one of the months being disputed may be withheld pending determination, but

all remaining months being disputed must be paid to avoid being disconnected for nonpayment. A customer must pay subsequent bills to a disputed bill, to avoid being disconnected for nonpayment

10. **REMOVAL OF FACILITIES** - Upon the termination of service, City may without liability for injury or damage, dismantle and remove its facilities installed for the purpose of supplying service to the Customer, and City shall be under no further obligation to serve Customer. If, however, City has not removed its facilities within one (1) year after termination of service, City shall thereafter give Customer thirty (30) days written notice before removing its facilities, or else waive any re-establishment charge within the next year for the same service to the same Customer at the same location. For purpose of this Section, notice to the Customer shall be deemed given at the time such notice is deposited at the U.S. Postal Service, first class mail, postage prepaid, to the Customer at his/her last known address.

11. **PROHIBITED SERVICE USES** - Customer shall not use water service for the following uses or activities. This prohibition is necessary to prevent water shortages.

No Customer shall cause or permit water furnished to any property to run or to escape from any hose, pipe, valve, faucet, sprinkler or irrigation device, onto a sidewalk, street, gutter or to otherwise escape from the property, if such running or escaping can reasonably be prevented.

- 11.2 Residential and nonresidential watering of grass, lawns, ground cover, open ground, shrubbery, crops, gardens and trees, including agricultural irrigation, in a manner or to an extent which allows substantial amounts of excess water to run off the area being watered, shall not be permitted. Minimum amount of run off which is a natural consequence of conservative watering, either by hand or mechanical sprinkler facilities, is permitted so long as such run off is not excessive.

- 11.3 All Customers shall conduct watering of landscape and lawns between 6:00 p.m. and 9:00 a.m. during the months of April through September. If a hand-held hose or drip irrigation system is used watering may be done at any time. City parks and the City golf course shall be exempt from this section, except these City facilities shall be expected to comply with these requirements, unless, because of some unforeseen necessity or for the benefit of public use watering is required. An exemption shall also be granted for discharge water from existing water-cooled air conditioners or coolers providing the discharge is to lawn or landscape areas and is not permitted to drain to streets.

- 11.4 Washing down of sidewalks, walkways, driveways, parking lots, patios, porches or other paved surfaces, shall be limited to five minutes twice a month for residential and nonresidential property shall be limited to five minutes per 500 square feet twice monthly. Flammable or other similar dangerous substances may be washed from said areas by direct hose flushing to remove immediate fire or sanitation hazards. Flammable or other similar dangerous substances shall not be washed into any wastewater collection system. In addition, public food service businesses may wash down surfaces as necessary to alleviate health, safety and sanitation hazards.

- 11.5 When not using a commercial automobile wash, the following shall apply. Automobiles shall be washed using a bucket during the washing process. A hose and nozzle which shuts off automatically when released shall be used for a quick rinse. Automobiles may not be washed on public streets.

- 11.6 No person shall permit water to leak from any facility on his or her premises; any leak shall be repaired in a timely manner.

12. **BACKFLOW DEVICES**

- 12.1 The City of Needles has the responsibility to protect the public water supply from contamination by implementing a cross connection control program. The City shall evaluate the potential health hazard to the public water supply which may be created as a result of conditions existing on the user's premises. The Customer shall be responsible for abatement of the cross connection(s) which exist on the Customers property, and shall install equipment according to City requirements at Customer expense.

- 12.2 The City shall establish cross connection requirements for the Customer, and shall use, but not be limited to, the following elements to determine such requirements:

- 12.2.1 Nature of materials being handled on customer's premises.

12.2.2 The probability of a back flow occurring on the premises.

12.2.3 The degree of piping system complexity and potential for modification.

12.2.4 Special Considerations:

- 12.2.4.1 Premises where substances harmful to health are handled under pressure in a manner which could permit their entry into the public water system. This includes chemical or biological process waters and water from public water supplies which have deteriorated in sanitary quality.
 - 12.2.4.2 Premises having an auxiliary water supply, unless the auxiliary supply is accepted as an additional source by the City and is approved by appropriate health agencies.
 - 12.2.4.3 Premises that have internal cross connections that are not abated to the satisfaction of the City or a health agency.
 - 12.2.4.4 Premises where cross connections are likely to occur and entry is restricted so that cross connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross connections do not exist.
 - 12.2.4.5 Premises having a repeated history of cross connections being established or re-established.
- 12.3 Backflow preventers required by the City shall have passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the appropriate regulatory and health agencies.
- 12.4 The type of protection required to prevent backflow into the public water supply shall be commensurate with the degree of hazard that exists on the Customer's premises.
- 12.5 The Customer shall assure that adequate maintenance and periodic testing are completed, as required by the City, to ensure the backflow preventers are operating properly. The Customer shall maintain and have available to the City for inspection, upon request, records of all maintenance and testing completed for a minimum of three years.
- 13. **CURTAILMENT** - When the availability of service is restricted and a reduction of service is required to maintain the integrity of part or the total water system, the Customer will be notified by the City to reduce or terminate use of service. Such notifications may be made by mail, phone, or in-person. The City will curtail service on a proportionate basis, where possible. Customers, who refuse or do not comply with curtailment requirements, may be terminated by the City. A service re-establishment charge of \$200.00 will be assessed for a first time violation, \$500.00 for second violation, and \$1000.00 for a third violation. A Customer who violates curtailment requirements more than three times may not be allowed to reestablish service.
- 14. **SUCCESSORS AND ASSIGNS** - Agreements for service shall be binding upon and for the benefit of the successors and assigns of Customer and City, but no assignments by Customer shall be effective until Customer's assignee agrees in writing to be bound and until such assignment is accepted in writing by the City.
- 15. **WARRANTY** - There are no understandings, agreements, representations or warranties, expressed or implied (including warranties regarding merchantability or fitness for a particular purpose), not specified herein concerning the sale and delivery of water services by the City to the Customer. These Terms and Conditions state the entire obligation of the City in connection with such services. Terms and Conditions

**CITY OF NEEDLES
NEEDLES, CALIFORNIA**

TERMS AND CONDITIONS FOR THE SALE OF WASTEWATER COLLECTION AND TREATMENT SERVICE

The following TERMS AND CONDITIONS and any changes authorized by the City Council or law will apply to the sale of waste water collection and treatment service within the City of Needles under the established rate or rates authorized by the City Council and currently applicable at time of sale.

1. GENERAL

- 1.1 Wastewater collection and treatment service will be supplied in accordance with these Terms and Conditions and any changes required by the City or law, and such applicable rate or rates as may from time to time be authorized by the City. However, in the case of a Customer whose service requirements are of unusual size or characteristics, additional or special rate and contract arrangements may be required.
- 1.2 These Terms and Conditions shall be considered a part of all of the City wastewater rate schedules, except where specifically changed by written agreement by the City.
- 1.3 In case of conflict between any provision of a rate schedule and the Terms and Conditions, the provisions of the rate schedule shall apply.
- 1.4 The failure of the City to insist upon strict performance of any of the provisions in the Terms and Conditions, or to exercise any of the rights or remedies provided in the Terms and Conditions, or any delay in the exercise of any of the rights or remedies, shall not release the Customer from any responsibilities or obligations imposed by Law or by the Terms and Conditions, and shall not be deemed a waiver of any right of the City to insist upon strict performance of the Terms and Conditions.

2. ESTABLISHMENT OF SERVICE

- 2.1 **Application for Service** - Customer requesting wastewater collection and treatment service may be required to appear at City's place of business to produce proof of identity and sign City's standard form of application for service or a contract before service is supplied by City.
 - 2.1.1 In the absence of a signed application or contract for service the supplying of wastewater collection and treatment service by the City and acceptance thereof by Customer shall be deemed to constitute a service agreement by and between the City and Customer for delivery, acceptance of and payment for service, subject to City's applicable rates and rules and regulations.
 - 2.1.2 Where service is requested by two or more individuals, City shall have the right to collect the full amount owed City from any one of the applicants.
- 2.2 **Service Establishment Charge** - A service establishment charge of \$6.25 for residential and nonresidential wastewater collection and treatment service will be assessed each time City is requested to establish, reconnect or reestablish wastewater collection and treatment service to Customer. Billing for the service establishment charge may be rendered as a part of the Customer's first bill.
- 2.3 **Grounds For Refusal Of Service** - City may refuse to establish or reestablish service if any of the following conditions exist:
 - 2.3.1 Applicant has an outstanding amount due with the City and is unwilling to make payment.
 - 2.3.2 A condition exists which in City's judgment is unsafe or hazardous.
 - 2.3.3 Applicant has failed to make the security deposit requirements set forth by City as specified under 2.4., 2.5 or 2.6.
 - 2.3.4 Applicant is known to be in violation of City's rate schedule.
 - 2.3.5 Applicant fails to furnish to City funds required to serve Applicant and which have been specified as a condition for providing service.

- 2.3.6 Applicant falsifies his or her identity for the purpose of obtaining service.
- 2.3.7 Service is already being provided at the address for which Applicant is requesting service.
- 2.3.8 Service in the name of another Customer currently living with the applicant at the same address for which service is being requested has been terminated for nonpayment and a delinquent balance is still outstanding.
- 2.3.9 Prior Customer was terminated for any of the below reasons and continues to reside on the premises for which applicant requests service:
 - a). Failure to pay a delinquent bill for utility service.
 - b). Failure to maintain deposit requirements.
 - c). Failure to pay for a bill to correct a previous under billing.
 - d). Failure to comply with curtailment procedures imposed by the City during service shortages.
 - e). Failure to provide reasonable and safe access to City's equipment and property.
 - f). Breach of written contract between City and Customer.
- 2.3.10 Applicant has failed to obtain all required permits and/or inspections indicating that Applicant's facilities comply with local construction and safety codes.
- 2.4 **Establishment of Residential Credit or Security Deposit**
 - 2.4.1 **Residential Establishment of Credit** - City may not require a security deposit from a new Applicant for residential wastewater collection and treatment service if Applicant is able to meet any of the following requirements:
 - 2.4.1.1 Applicant has had service of a comparable nature with City at another service location within past two (2) years and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has not had an unpaid final bill.
 - 2.4.1.2 Applicant can provide a letter regarding credit or verification from a utility where service of a comparable nature was received within the last two years, and the letter states that the Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.
 - 2.4.1.3 Applicant provides a guarantor, satisfactory to the City, to secure payment of bills for the service being requested.
 - 2.4.2 **Residential Establishment of Security Deposit** - When credit cannot be established as provided for in Section 2.4.1 hereof or when it is determined that Applicant left an unpaid final bill owing to another utility, Applicant may be required to place a cash deposit to secure payment of bills for service.
- 2.5 **Establishment of Nonresidential Credit or Security Deposit**
 - 2.5.1 **Nonresidential Establishment of Credit** - City may not require a security deposit from a new Applicant for Nonresidential wastewater collection and treatment service if Applicant is able to meet any of the following requirements:
 - 2.5.1.1 Applicant has had service for at least one year of a comparable nature with City at another service location within the past two years, and was not delinquent in payment to any utility during the last twelve (12) consecutive months, or disconnected for nonpayment, or has not had an unpaid final bill.
 - 2.5.1.2 Applicant can provide a letter regarding credit or verification from a utility where service of a comparable nature was last received which states Applicant had a satisfactory payment history at time of service discontinuation, and such service was for at least 12 consecutive months.
 - 2.5.2 **Nonresidential Establishment of Security Deposit** - Except as provided in §2.5.1, all nonresidential Applicants may be required to:
 - 2.5.2.1 Place a cash deposit to secure the payment of bills for service as prescribed herein, or

- 2.5.2.2 Provide a noncash security deposit in the form of a Surety Bond, Irrevocable Letter of Credit or Assignment of Moneys in an amount equal to the required security deposit.

2.6 **Re-establishment of Security Deposit**

- 2.6.1 **Residential** - City may require a residential Customer to establish or reestablish a security deposit if Customer becomes delinquent or if the customer has been disconnected for nonpayment during the last twelve (12) months, or when Customer's financial condition may jeopardize the payment of their bill as determined by a bankruptcy filing.
- 2.6.2 **Nonresidential** - City may require a nonresidential Customer to establish or reestablish a security deposit if the Customer becomes delinquent or if the Customer has been disconnected for nonpayment during the last twelve (12) months, or when the Customer's financial condition may jeopardize the payment of their bill, as determined by a credit investigation, financial reorganization notice or bankruptcy filing.

2.7 **Security Deposits**

- 2.7.1 Residential security deposits must be a minimum cash deposit of one hundred dollars (\$100.00), or two times the combined estimated monthly billing for water, wastewater and solid waste collection services whichever is the greater.
- 2.7.1.1 Deposits will automatically be refunded after 12 months of service provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless Customer has filed bankruptcy.
- 2.7.2 Nonresidential security deposits may be either cash or noncash, as described in 2.7.2.1, and must be a minimum deposit of one hundred dollars (\$100.00), or two (2) times Customer's combined estimated monthly billing for water, wastewater and solid waste collection services.
- 2.7.2.1 Deposits and noncash deposits on file with the City will be reviewed after twenty-four (24) months of service and will be refunded or released provided Customer has not been delinquent in the payment of bills or disconnected for nonpayment during the previous twelve (12) consecutive months, unless the Customer's financial condition warrants extension of the security deposit. Deposits not returned within the first twenty four month period, shall be reviewed annually to determine if Customer qualifies for return of the deposit.
- 2.7.3 City reserves the right to increase or decrease the security deposit amount when the Customer's rate for monthly charges changes by more than ten (10) percent. Separate security deposits may be required for each location.
- 2.7.4 Customer security deposits shall not preclude City from terminating agreement for service or suspending service for any failure in the performance of Customer obligation under the agreement for service.
- 2.7.5 Cash deposits held by the City shall not earn interest. Deposits on inactive accounts may be applied to the final bill and the balance if any, will be refunded to the Customer of record within sixty (60) days.
- 2.7.6 If Customer terminates service with City, the security deposit may be credited to Customer's final bill.
- 2.8 **Facility Extensions** - Installations requiring the City to extend its facilities in order to establish collection and treatment service will be made in accordance with City's Conditions Governing Extensions of Waste Water Collection and Treatment Services.

3. **RATES**

- 3.1 **Rate Information** - City shall provide a copy of the rate schedule to the Customer, when requested. In addition, City shall notify Customers of any change in rate schedules affecting those Customers.

- 3.2 **Rate Selection** - Customer's service characteristics and service requirements determine the selection of the applicable rate schedule. City will use reasonable care in initially establishing service to the Customer under the most advantageous rate schedule applicable to the Customer. However, City cannot guarantee that the most economic applicable rate will be applied. City will not make any refunds in any instances where it is determined that Customer would have paid less for service had Customer been billed on an alternate applicable rate or provision of a rate.

4. **BILLING AND COLLECTION**

4.1 **Customer Billing -**

- 4.1.1 Wastewater collection and treatment service billing periods normally consist of approximately 30 days unless designated otherwise under the rate schedules or at City option.
- 4.1.2 The City normally bills each premise separately for wastewater collection and treatment service; however, adjacent and contiguous premises not separated by private or public property or right-of-way and operated as one integral unit under the same name and as a part of the same business, and having only one connection to the wastewater collection system, may be considered a single premise.
- 4.1.3 Wastewater collection and treatment service bills will be rendered in combination with water service bills when the premise(s) is connected to the City's water system.
- 4.1.4 Customer's receiving a combination wastewater/water service bill may not pay the services separately.

4.2 **Adjustment of Bills for Billing Error**

- 4.2.1 A billing error is an error by the City which results in incorrect billing charges to the Customer. Billing errors may include clerical errors by a City representative such as applying the wrong rate, wrong billing factor or an incorrect calculation. Billing error does not include unauthorized use, failure of the customer to notify the City of changes in operation, or failure of the Customer to take advantage of a rate or condition of service which the Customer is eligible.
- 4.2.2 Where the City overcharges or undercharges a Customer as the result of a billing error, the City may render an adjusted bill for the amount of the undercharge, and shall issue a refund or credit to the Customer for the amount of the overcharge, for the period of the billing error, but not to exceed three years in the case of an overcharge, and, in the case of an undercharge not to exceed three months for residential service and one year for any other class of service.

- 4.3 **Collection Policy** - It is the policy of the City to discontinue wastewater collection and treatment services to Customers by reason of nonpayment of bills only after notice and a meaningful opportunity to be heard on disputed bills. The City's application for service and all bills shall contain an address and phone number where Customers may direct billing concerns.

- 4.3.1 All bills rendered by the City are due and payable no later than nineteen (19) days from the billing date. Any payment not received within this time frame shall be considered past due. Bills for which payment has not been received within fifteen (15) days of the past due date will be considered delinquent. All delinquent bills shall be subject to the provisions of the City's termination procedure. City reserves the right to suspend or terminate Customer's service for:
- a). nonpayment of delinquent service bills;
 - b). nonpayment of service establishment charges;
 - c). nonpayment of security deposits;
 - d). nonpayment of returned check charges;
 - e). nonpayment of late charges;
 - f). nonpayment of collection charges;
 - g). and/or to declare past due service bill amounts, past due service establishment charges, past due security deposits, past due returned check charges, and past due collection charges subject to a late charge at the rate of eighteen percent (18%) per annum.
- 4.3.2 If Customer has one or more utility services with City and one or more of such services is terminated for nonpayment and Customer is unwilling to make arrangements with City for payment, City shall be entitled to transfer the balance due on the terminated service(s) to any other active utility account of Customer. The failure of the Customer to pay the active account shall result in the suspension or termination of service thereunder. However residential wastewater collection and treatment service shall not be discontinued, because of nonpayment of other classes or types of wastewater collection and treatment service.

4.4 Responsibility for Payment of Bills -

- 4.4.1 Customer is responsible for the payment of bills for wastewater collection and treatment services until service is ordered discontinued, and the City has had two (2) working days time to process request.
- 4.4.2 Any wastewater collection and treatment service charge remaining unpaid after notice and an opportunity to be heard shall become a lien upon such premises. Failure of any Customer billed or the owner of a premise to pay any wastewater collection and treatment service charge prior to delinquency, may result in the City taking steps authorized by law to enforce payment of such lien.
- 4.4.3 When an error is found to exist in the billing rendered to the Customer, City will correct such an error to recover or refund the difference between the original billing and the correct billing. Such adjusted billings will not be rendered for periods in excess of three years from the date the error is discovered. Any refunds to Customers resulting in adjusted billings will be made promptly upon discovery by City. Under billings by City shall be billed to Customer who may be given up to one year to pay if the under billing is less than one thousand dollars (\$1000.00), and up to three years to pay if under billing is more than one thousand dollars (\$1000.00), without late payment penalties. If the account is billed on a special contract, or service has been established but no bills have been rendered, Customer shall be limited to six months to pay under billings for residential accounts and three months for nonresidential accounts.

4.5 Returned Checks - If City is notified by the Customer's bank that the bank will not honor a check tendered by Customer for payment of any bill, City may require the Customer to make payment in cash, by money order, certified check or other means which guarantee the Customer's payment to the City.

- 4.5.1 Customer shall be charged a fee of fifteen dollars (\$15.00) for each instance where Customer tenders payment of a bill with a check which is not honored by Customer's bank. Only one fifteen dollar (\$15.00) fee shall be charged for each instance when a customer has a check which was dishonored for both the City wastewater and water service payment.
- 4.5.2 The tender of a dishonored check shall in no way:
 - i) relieve Customer of the obligation to render payment to City under the original terms of the bill;
 - ii) or, defer City's right to terminate service for nonpayment of bills.

4.6 Collection Charge - City may require payment of a Collection Charge of \$10.00 when an authorized City representative travels to Customer's premises to accept payment of a delinquent account, notify of service termination, make payment arrangements, or to disconnect service to a delinquent account. Only one ten dollar (\$10.00) Collection Charge shall be charged for each instance when a representative travels to a Customer's premises for both wastewater and water service notification, collection or termination.

- 4.6.1 To avoid discontinuation of service, Customer may make payment in full, including any necessary deposit in accordance with Section 2.5 or, at City option, may make acceptable payment arrangements.

4.7 Payment Assistance and Counseling - The City will provide the following services to Customers unable to pay their bills.

- 4.7.1 The City will offer installment payment plans to allow Customers to amortize past due and current amounts over a reasonable period of time. Customers who default on installment payment plans may not qualify for future installment payment arrangements.
- 4.7.2 Customer making payments on an installment payment plan must keep the account current as charges for service accrue.
- 4.7.3 City will furnish Customer upon request, information on the availability of alternate sources of financial assistance.

5. SERVICE RESPONSIBILITIES OF CITY AND CUSTOMER

- 5.1 **Responsibility: Use of Service or Apparatus** - City and Customer assume all responsibility on their respective sides of the wastewater collection system, as well as for any apparatus used in connection therewith.

5.1.1 Customer and City each shall save the other harmless from and against all claims for injury or damage to persons or property occasioned by or in any way resulting from the waste water collection service or the use thereof on their respective sides of wastewater collection system. City shall, however, have the right to suspend or terminate service in the event City should learn of service use by Customer under hazardous conditions or for illegal purposes. In the event Customer's services are suspended or disconnected for these reasons, the Customer shall be entitled to request a hearing within 10 days to determine the validity of any allegations of illegal use or hazardous conditions.

5.1.2 Customer shall exercise all reasonable care to prevent loss or damage to City property.

5.1.3 Customer shall be responsible for payment of loss or damage to City property arising from neglect, carelessness or misuse, and shall reimburse City for the cost of necessary repairs or replacements.

5.2 **Service Interruptions: Limitations on Liability of City** - City shall not be liable to Customer for any damages occasioned by interruptions or curtailment of wastewater collection and treatment service except where caused by City's willful misconduct or gross negligence. City may, without incurring any liability therefore, suspend Customer's wastewater collection and treatment service for periods reasonably required to permit City to accomplish repairs to or changes in any of City's facilities.

5.2.1 In the event of a national emergency or local disaster resulting in disruption of normal service, City may, in the public interest, interrupt service to other Customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal service to these agencies can be restored.

5.3 **City Access to Customer Premises** - City's authorized agents shall have safe access to Customer's premises at all reasonable hours to install, inspect, operate or maintain the waste water collection system, and to inspect and determine the connected waste water facilities and equipment. Neglect or refusal on the part of the Customer to provide such access shall be sufficient cause for discontinuance of service by City, and assurance of access may be required before service is restored.

5.4 **Easements** - All suitable easements and right-of-way required by the City for any portion of the extension which is on premises owned, leased or otherwise controlled by Customer shall be furnished in City's name by the Customer without cost to City and in reasonable time to meet proposed service requirements. All easements and right-of-way obtained on behalf of City shall contain such terms and conditions as are acceptable to the City.

6. **SERVICE CONNECTIONS**

Customer shall install and maintain all premise connection sewers and the interconnection to the sewer main. Such installations shall comply with requirements of the City's Conditions Governing Extensions of Wastewater Collection and Services.

7. **TERMINATION OF SERVICE**

7.1 **Customer Initiated Termination** - A Customer requesting termination of wastewater collection and treatment services must provide the City with at least two working days notice and a disconnect date. The Customer shall remain responsible for all service use until two working days after the disconnect notice or the requested disconnect date, whichever is later.

7.2 **Termination of Residential Service To Ill, Elderly or Handicapped Customers** -

7.2.1 Residential Customers that are ill, elderly (over 65 years of age) or handicapped persons who have an inability to pay will not be terminated until all of the following have been attempted:

- a). The Customer has been made aware of the availability of funds from various governmental and social assistance agencies which the City is aware of.
- b). City has made a diligent effort to notify a third party previously designated by the Customer.
- c). City has attempted to make satisfactory payment arrangements with Customer and/or previously designated third party.

- 7.3 **With Notice** - City may without liability for injury or damage disconnect service to any Customer for any of the reasons stated below, provided City has met the termination notification requirements.

7.3.1 The City may disconnect service after written notification for the following reasons:

- Customer violation of any City rate schedules.
- Failure of Customer to pay a delinquent bill for service.
- Failure of Customer to meet or maintain deposit requirements.
- Failure of Customer to provide reasonable access to equipment and property.
- Customer breach of contract for service between City and customer.
- Failure of prior customer to pay a delinquent bill for service where the prior customer continues to reside on premises.
- When necessary for City to comply with an order of any Governmental agency having such jurisdiction.
- Customer fails to establish credit, after City, for Customer convenience, provided service before credit is established or continued service to a customer when credit was to be re-established.
- The City shall have the right (but not the obligation) to remove any and all of its property

7.3.2 Termination notice requirements.

- Fifteen day advance written notice of intent to terminate for nonpayment, which can be included or be a part of monthly billing notices.
- Five day advance written notice of intent to terminate for reasons other than nonpayment, which can be included or be a part of monthly billing notices.
- Two day advance written notice of intent to terminate for dishonored checks (NSF)
- Notice shall state reason for termination
- Notice shall be considered given to the Customer when a copy thereof is delivered to the service location or posted first class in the United States mail, addressed to the Customer's last known address.
- Service may be terminated on or after the day specified in the notice without giving further notice, if the violation has not been satisfied.
- Service may only be discontinued in conjunction with a personal visit to the premises by an authorized representative of the City.
- Notice shall state that any Customer disputing the correctness of a bill may have a hearing before a City representative.
- The City shall have the right (but not the obligation) to remove any and all of its property

- 7.4 **Without Notice** - City may without liability for injury or damage discontinue service to any Customer without notice under any of the following conditions.

- The existence of an obvious hazard to the health or safety of persons or property.
- Failure of Customer to comply with curtailment procedures imposed by City during a supply shortage.
- Failure of Customer to comply with the terms of any payment amortization agreement or contract.
- City has evidence of unauthorized resale or use of wastewater collection and treatment services.
- The City shall have the right (but not the obligation) to remove any and all of its property.

- 7.5 **Restoration of Service** - City shall not be required to restore service until the conditions which resulted in the termination have been corrected to the satisfaction of the City.

8. **DISPUTED BILLS AND COMPLAINTS**

- 8.1 **Bill Inquiries and Complaint Investigations** - A Customer may request a bill inquiry or complaint investigation by contacting the City's utilities office. An investigation will be completed by the City, and the Customer will be advised of the investigation's results and any action taken. If the Customer is seeking to set up an extended payment arrangement, the City will attempt to assist by offering an amortized payment schedule, and provided the Customer has not defaulted on a previous payment agreement.
- 8.2 **Unresolved Bill Inquiries and Complaint Investigation** - If a Customer is not satisfied with the investigation and/or action completed by the City's utilities office, the Customer should elevate the inquiry or complaint to the next level within the City staff, in the order recommended below.

- Utility Business Manager or Supervisor
- Public Utilities General Manager
- City Manager

- 8.3 **Appeal To The Utility Board** - A Customer who is not satisfied or believes the staff investigation results are incorrect or unfair, may appeal to the Needles Board of Public Utilities. The Board will hear only appeals that have not been resolved to the Customer's satisfaction, after the City Manager has finalized his review. A form to request an appeal is available at the utilities office, and must be submitted at least two weeks prior to a regularly scheduled Board meeting to ensure placement on the agenda. The Customer is encouraged to be present at the Board hearing, or to have a representative present.
- 8.4 **Appeal To The City Council** - A Customer who remains unsatisfied after appealing their concerns to the Needles Board of Public Utilities, may appeal to the City Council for final resolution. The City Clerk will assist the Customer with scheduling the appeal. The Customer or his representative must be present at the Council meeting for the appeal to be heard and/or acted upon.
- 8.5 **Payment Of Disputed Bills** - A Customer who has requested an investigation or who is appealing a determination shall not have the waste water collection and treatment service disconnected for nonpayment of the disputed bill. If the Customer is disputing multiple months of billing, payment for one of the months being disputed may be withheld pending determination, but all remaining months being disputed must be paid to avoid being disconnected for nonpayment. A customer must pay subsequent bills to a disputed bill, to avoid being disconnected for nonpayment.

10. **SERVICE USE REGULATIONS -**

10.1 **General -**

- 10.1.1 It shall be a Misdemeanor for any person, firm or corporation to deposit, in an unsanitary manner, upon public or private property or other natural outlet within the City, or any area under the jurisdiction of the City, any human or animal excrement, sewage, industrial, household or similar wastes or contaminated water, except where suitable treatment has been provided in an approved and properly licensed or permitted collection and treatment system.
- 10.1.2 It shall be a Misdemeanor for any person, firm or corporation to discharge sewage, wastewater, industrial waste, or other wastes into the City's treatment and collection system contrary to the provisions of the Terms and Conditions, federal or state pretreatment requirements, discharge permit requirements or any other order of the City.
- 10.2 **Discharge Of Sewerage Into Collection And Treatment System** - No person shall discharge sewerage or wastewaters into the City's wastewater treatment facilities or collection system unless a discharge permit has been applied for and issued by the City. No permit shall be issued unless the application for the permit is accompanied with appropriate fees as required by the City.
- 10.3 **Prohibited Wastes** - It shall be a Misdemeanor for any person to discharge or cause to be discharged prohibited waste into any City wastewater sewer collection and treatment system.
- 10.3.1 Storm water, surface water, ground water, roof run-off, subsurface drainage, cooling water, or unpolluted industrial process water shall not be discharged to any sanitary sewer collection and treatment system.
- 10.3.1.1 Storm water and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as storm sewers, or to an approved natural outlet.
- 10.3.1.2 Industrial cooling water or unpolluted process water may be discharged, upon approval of the City, to a storm sewer or natural outlet.
- 10.3.2 Except as hereinafter provided, the following described waters or wastes shall not be discharged into the City's wastewater collection and treatment system.
- 10.3.2.1 **Hot Fluids**. Any liquid or vapor having a temperature higher than one hundred fifty degrees (150° F) Fahrenheit.
- 10.3.2.2 **Oil, Fats, Grease**. Any water or waste discharge which may contain more than fifty (50) parts per million by weight of oil, fat or grease.
- 10.3.2.3 **Flammables and Explosives**. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, solid or gas.

- 10.3.2.4 Solids and Viscous Substances. Any ashes, cinders, sand, straw, shavings, metal, glass, feathers, tar, plastics, wood, food substances that are not ground household garbage or other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the collection or treatment systems
- 10.3.2.5 Deficient or Excess pH. Any water or wastes having a pH lower than 5.5, or higher than 9.0, or having any other corrosive property capable of causing damage or hazards to the wastewater collection and treatment system structures, equipment or personnel.
- 10.3.2.6 Toxics and Poison. Any water or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any wastewater collection or treatment process, constitute a hazard to humans or animals, or create any hazard in the water or the lands receiving the effluent of the treatment plant.
- 10.3.2.7 Suspended Solids. Any water or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the waste water treatment plant.
- 10.3.2.8 Noxious Effluvium. Any noxious or malodorous gas or substance capable of creating a public nuisance.
- 10.3.2.9 Other. Any other substance prohibited by Federal, State or local law, or regulated by any governmental agency by permit, license, order, degree or other similar document.
- 10.4 Wastes Requiring Approval - No person shall without prior approval obtained from the City Manager, or his authorized representative, discharge into the wastewater collection system any water or wastes having:
 - 10.4.1 Excessive Oxygen Demand. Water or wastes that have a five-day biochemical oxygen demand greater than three hundred parts per million weight shall be considered to have an excessive oxygen demand.
 - 10.4.2 Excessive Suspended Solids. Water or wastes that contain suspended solids greater than three hundred fifty parts per million weight shall be considered to have excessive suspended solids.
 - 10.4.3 Restricted Wastes. Water or wastes that contain any quantities of the restricted wastes having the characteristics described in Section 10.3.
- 10.5 Noncompliance
 - 10.5.1 The City shall discontinue service to a Customer for noncompliance with the prohibited uses of wastewater service, if after notice the customer does not correct the violation within five days. Service will not be reestablished until after Customer has complied.
 - 10.5.2 If the City determines a prohibited use or other violation results in a potential public hazard or menace, then the City may enter on the customer's premise(s) and do such things and expend such sums as may be necessary to abate the potential hazard or menace without a five day notice of correction. Customer shall reimburse the City for any such expenditures required.
- 10.6 Exemption Procedure - A Customer may request a special use exemption for a prohibited activity. The request must be in writing and shall be submitted to the Public Utilities General Manager and approved by the Needles Board of Public Utilities. The request must explain why the exemption is being sought, the benefits the Customer will receive from such exemption, the approximate amount of waste or wastewater discharged, and the desired time period of the exemption. Approval must be received prior to Customer using service for a prohibited activity

11. INDUSTRIAL WASTE AND WASTEWATER

11.1 Discharge Permits

- 11.1.1 All industrial customers proposing to connect to or to contribute to the wastewater treatment and collection system shall obtain an Industrial Wastewater Discharge Permit before connecting to or contributing to the system.
- 11.1.2 Industrial customers requesting an Industrial Wastewater Discharge Permit shall complete the appropriate application form, which may require:

- a). Name, mailing address, and location of facility.
 - b). SIC number, according to the Standard Industrial Classification Manual, Bureau of Budget, 1987, as amended.
 - c). Wastewater constituents and characteristics as measured by a state certified laboratory.
 - d). Time and duration of proposed discharge.
 - e). Average daily and peak wastewater flow rates, including any seasonal variances.
 - f). Site plans, floor plans, mechanical and plumbing plans and details to show all sewers, sewer connections and appurtenances by the size, location and elevation.
 - g). Description of activities, facilities and plant processes on the premises, including all materials which are or could be discharged.
 - h). Whether or not discharge is subject to pretreatment standards (categorical or local), and if such pretreatment will be met on a consistent basis.
 - i). Any other information required by the City to evaluate the application.
- 11.1.3 Within sixty (60) days after receipt of a completed application, an approved industrial pretreatment program from the appropriate regulatory agency and permit filing fees, the City will evaluate the data furnished by the user and submit the application to the Board of Public Utilities for review of the Industrial Wastewater Discharge Permit. After evaluation and acceptance of the data furnished, the Board of Public Utilities may recommend the issuance of the Industrial Wastewater Discharge Permit and establish an appropriate monthly service fee. Final approval of the Board's recommendation and the monthly service fee by the City Council is required prior to issuance of the permit. If the Board determines that the proposed discharge will not be acceptable, they shall disapprove the application and notify the applicant.
- 11.1.4 Industrial Wastewater Discharge Permits shall be subject to all provisions contained in the Terms and Conditions For The Sale Of Waste Water Treatment And Collection Service, applicable regulations, charges and fees established by the City. Permits may contain the following:
- a). The unit charge or schedule of user charges and fees for the wastewater discharge.
 - b). Limitations on the average and maximum wastewater constituents and characteristics.
 - c). Limitations on the average and maximum flow rate and time of discharge or requirements for flow regulation and equalization.
 - d). Requirements for installation and maintenance of inspection and sampling facilities.
 - e). Specifications for monitoring programs which may include sampling locations, frequency of sampling, number and type and standards for analyses.
 - f). Compliance schedules.
 - g). Requirements for submission of technical or discharge reports.
 - h). Requirements for maintaining and retaining plant records relating to the wastewater discharge.
 - i). Other conditions as deemed appropriate to ensure compliance with the permit, Terms and Conditions, or applicable laws or regulations.
- 11.1.5 The terms and conditions of an Industrial Wastewater Discharge Permit may be modified by the City during the term of the permit as federal, state or local limitations and requirements are modified or other just cause exists.
- 11.1.6 Permits shall be issued for a specified time period, not to exceed three years. A permit may be issued for a period less than three years, or may be stated to expire on a specific date. The customer shall apply for permit reissuance a minimum of sixty (60) days prior to the expiration of the customer's existing permit.
- 11.1.7 Industrial Wastewater Discharge Permits are issued to a specific customer for a specific operation. An Industrial Wastewater Discharge Permit shall not be reassigned, transferred or sold without the written approval of the City Manager or his authorized representative and the Board of Public Utilities. Any succeeding owner or customer shall also comply with the terms and conditions of the existing permit.
- 11.2 Alteration of Discharge - If the customer wishes to make an alteration to pretreatment facilities or the connection(s) to the City's wastewater collection system, or if customer wishes to discharge additional, or excess of the approved amount of wastes, or wastes of a different nature, type or substance not consistent with the original permit approval, the customer shall submit a letter to the City requesting such approval. The City shall process the request in the same manner as the original application for an Industrial Wastewater Discharge Permit, and may request the customer reapply for an updated permit prior to any approval.
- 11.3 Discharge of Unapproved Material Unlawful - It shall be a Misdemeanor for any person to discharge into the City's wastewater treatment and collection system, directly or indirectly, any industrial wastewater which is not approved as to kind and amounts and is discharged without an approved Industrial Wastewater Discharge Permit.

- 11.4 **Compliance With Standards** - Except as set forth in the Terms and Conditions, no industrial waste shall be discharged to the City's wastewater treatment plant or collection system unless it conforms to the requirements set forth in Sections 10 and 11. Compliance to requirements shall be based on the mean values obtained from analysis of industrial waste samples representative of the quantity and quality of the discharge to the sewer at the point of entry of industrial waste to the City's collection system, or, if this is not feasible, at other points up the stream of individual industrial waste discharge. All such samples shall be weighted with the flow at the sampling point to furnish the values weighted with time and quantity for each required chemical constituent. Wherever deemed practical by the City, these industrial wastewater samples may be composited with regard to time and quantity and the analysis made from such composite samples.
- 11.5 **Additional Industrial Wastewater Discharge Restrictions** - Industrial wastewater dischargers shall comply with the below discharge restrictions:
- 11.5.1 The content of total oil and grease shall at no time exceed six hundred milligrams per liter.
 - 11.5.2 The content of floatable oil and grease shall at no time exceed one hundred milligrams per liter.
 - 11.5.3 The content of floatable hydrocarbon oil shall at no time exceed one hundred milligrams per liter.
 - 11.5.4 The daily average five-day biochemical oxygen demand shall at no time exceed one thousand milligrams per liter.
 - 11.5.5 The daily average dissolved sulfide content shall at no time exceed one-tenth milligram per liter.
 - 11.5.6 The pH shall at no time be below 6.0.
- 11.6 **Monitoring and Inspection**
- 11.6.1 City may require monitoring facilities be provided and operated at the user's own expense, to allow inspection, sampling and flow measurement of the wastewater flow and the user's internal drainage systems. The monitoring facility should normally be situated on the customer's premises, but the City may, when such a location would be impractical or cause undue hardship on the customer, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles. There shall be ample room in or near such sampling facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling and measurement equipment shall be maintained at all times in a safe and proper operating condition at the expense of the customer. Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the City's requirements and all applicable local construction standards and specifications. Construction shall be completed within ninety days following written notification from the City.
 - 11.6.2 The City may inspect the facilities of any customer to ascertain whether all permit and discharge requirements are being met. Persons or occupants of premises where wastewater is created or discharged shall allow the City's inspector ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination or in the performance of any other related duties. The City inspector shall have the right to set up on the customer's property such devices as necessary to conduct sampling inspection, compliance monitoring and/or metering operations. Where a customer has security measures in force which would require proper identification and clearance before entry into their premises, the customer shall make necessary arrangements with their security personnel so that upon presentation of suitable identification personnel from the City will be permitted to enter, without delay, for the purposes of performing their responsibilities.
- 11.7 **Revocation of Waste Water Discharge Permit** - An Industrial Wastewater Discharge Permit may be revoked when it is found that the discharge is in violation of the provisions of the Terms and Conditions, or the permit requirements. Any person notified of a suspension of the wastewater treatment service and/or the wastewater discharge permit shall immediately stop or eliminate the discharge. In the event of a failure of the person to comply voluntarily with the suspension order, the City shall take steps as deemed necessary, including immediate severance of the sewer connection(s), to prevent and minimize damage to the treatment facilities and collection system, or harm to any individuals. The City may reinstate the Industrial Wastewater Discharge Permit and/or the wastewater treatment and collection service upon proof of the elimination of the noncomplying discharge. A detailed written statement submitted by the user describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to the city within twenty days of the date of any violation.

- 11.8 **Federal Categorical Pretreatment Standards** - Upon the effective date of a federal or state categorical pretreatment standard for a particular industrial category, the federal or state standard, if more stringent than limitations imposed by the Terms and Conditions or the Industrial Wastewater Discharge Permit shall immediately supersede the limitations imposed by either documents. The City shall notify all affected users of the pretreatment changes and the applicable reporting requirements.
- 11.9 **Confidential Information** - Information and data on a customer obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspections shall be available to the public or other governmental agencies without restriction unless the customer specifically requests and is able to demonstrate to the satisfaction of the City Manager or his authorized representative, that the release of such information would divulge information, processes or methods of production entitled to protection pursuant to state or federal law. When requested by a customer, the portions of a report which might disclose legally protected information shall not be made available upon written request to governmental agencies for uses related to the Terms and Conditions, the National Pollution Discharge Elimination System (NPDES) permit, and/or the pretreatment program; provided, however, that such portions of a report shall be available for use by the State or any State agency in judicial review or enforcement proceedings involving the person or corporation furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.
- 11.10 **Waiver of Standards** -
- 11.10.1 The City may waive constituent standards for industrial wastewater discharge established by the Terms and Conditions, if after evaluation the City determines that:
- 11.10.1.1 The discharge will not cause harm to the treatment facilities or the collection system, nor cause any unreasonably or inequitably burden on the operation of either the treatment facilities or the collection system.
- 11.10.1.2 The individual discharge, when evaluated with the existing treatment and collection flow, does not affect the ability of the City to meet the requirements of the Regional Water Quality Control Board or other regulatory agencies or permits.
- 11.10.1.3 The discharge does not violate applicable State and Federal regulations.
- 11.10.1.4 The discharge does not contain toxic constituents in excess of the Regional Water Quality Control Board requirements.
- 11.10.1.5 Customer meets all federal categorical pretreatment standards.
- 11.10.1.6 The Board of Public Utilities and the City Council approve such waiver.
- 11.10.2 An approved Industrial Wastewater Discharge Permit with a waiver or modification of standards shall include a statement from the City as to why the waiver is reasonable. Any permit granted with such a waiver may be withdraw at any time the City makes a determination that either the treatment facilities or collection system is burdened, or the City ability to meet regulatory or permit requirements is materially affected.
- 11.11 **Discharge Permit Fees** - All Industrial Wastewater discharges shall be required to pay an Industrial Wastewater Discharge Permit fee at the time of submittal of application and at the time of renewal.
12. **GREASE, OIL, SAND AND LINT INTERCEPTORS** - Grease, oil, sand and lint interceptors shall be provided when, in the opinion of the City, they are necessary to the properly collect and treat wastewater containing grease in excessive amounts or other flammable wastes, or sand, lint or other harmful ingredients, except that such interceptors shall not be required for private single family residences. Interceptors shall be located in an accessible location for easy cleaning and inspection. Installation and maintenance expense shall be by customer. Maintenance shall be scheduled and completed by customer in a manner that ensures continuous and efficient operation at all times.
13. **VEHICLE SERVICING FACILITY REQUIREMENTS**
- 13.1 Any facility maintained for the servicing, repair or washing of vehicles, roadway or farm machinery, or industrial or heavy equipment shall install and maintain a sand-and-oil interceptor. The wastewater from bathrooms of such servicing facilities shall not be allowed to pass through the interceptor, but all other wastewater at the facility shall pass through the interceptor before discharging to the City's wastewater collection system.
- 13.2 The interceptors at such servicing, repair or washing facilities shall be designed to have operating fluid capacity capable of handling maximum possible flows and sized so that a seven day accumulation of sand and oil together will not fill more than 25% of the fluid capacity. The interceptor shall also be designed to retain any oil or grease which will float and any sand which will settle, as well as be watertight and structurally sound and durable. The interceptor shall be located for easy cleaning and inspection.

- 13.3 The customer shall provide the City with a drawing of the interceptor design and the connections to interior and exterior piping, and the drawing shall include a statement of verification from a civil engineer registered in the State of California that the design meets all the requirements of Section 13 of the Terms and Conditions.
- 13.4 Maintenance of the interceptor shall be scheduled and completed by customer in a manner that ensures continuous and efficient operation at all times.
- 13.5 If the City determines that a customer is not properly servicing or maintaining a customer-owned interceptor, the City may, at its discretion, either disconnect service to the premise(s) or enter on the customer's premise(s) and do such things and expend such sums as may be necessary to abate the problem(s), after providing the customer with a five day notice of correction. If in the opinion of the City the interceptor problems presents an imminent hazard to the public, the City may either interrupt service or make repairs to the interceptor without notice. Customer shall reimburse the City for any such expenditures required.

14. **CUSTOMER OWNED LIFT STATIONS -**

- 14.1 Maintenance of the customer owned lift station shall be scheduled and completed by owner or occupier in a manner that ensures continuous and efficient operation at all times.
- 14.2 If the City determines that a customer is not properly servicing or maintaining a customer-owned lift station, the City may, at its discretion, either disconnect service to the premise(s) or enter on the customer's premise(s) and do such things and expend such sums as may be necessary to abate the problem(s), after providing the customer with a five day notice of correction. If in the opinion of the City the lift station problems presents a imminent hazard to the public, the City may either interrupt service or make repairs to the lift station without notice. Customer shall reimburse the City for any such expenditures required.

15. **DISPOSAL OF WASTES FROM PERMITTED WASTE HAULERS**

- 15.1 The City will provide wastewater treatment services to septage system pumpers and contractors who are properly licensed and permitted for septage waste hauling by the appropriate regulatory agency(ies) and the City of Needles. Disposal of septage shall be restricted to only pumpings from residential and commercial septage systems in non-sewered areas within fifteen miles of the City of Needles and within the State of California.
- 15.2 It shall be a misdemeanor to dispose of any non-septage system waste in the City wastewater treatment facility or collection system, or residential or commercial septage system waste without a valid City of Needles Septage Discharge Permit and a completed and authorized Septage Discharge Manifest.
- 15.3 Commercial grease traps and similar wastewater interceptor pumpings shall not be discharged into the City wastewater treatment facility or collection system. Interceptor pumpings shall be disposed of at approved landfills or other facilities established for such waste treatment.
- 15.4 Industrial system waste shall not be discharged into the City wastewater treatment facility or collection system. Such wastes shall be disposed of at an approved waste treatment facilities.
- 15.5 **Septage Discharge Permits**
 - 15.5.1 All septage pumpers and contractors proposing to discharge to the City's wastewater treatment and collection system shall obtain a City of Needles Septage Discharge Permit before discharging any wastes to the system. A permit shall be issued for a five year period, and shall cost \$1000.
 - 15.5.2 A Septage Discharge Permit may be rescinded for noncompliance to the Terms and Conditions, permit requirements, State or other regulatory requirements, or for falsification of documentation or unauthorized disposal of septage into the City wastewater treatment facility or collection system.
 - 15.5.3 Septage system pumpers and contractors requesting a Septage Discharge Permit shall complete the appropriate application form, which may require:
 - a). Name, mailing address, telephone number and location of business.
 - b). Name of owner and contact person.
 - c). Emergency or after-hours phone number.
 - d). California waste hauling permit number.
 - e). List of Company vehicles, license numbers and hauling capacity.
 - f). Estimated annual number of discharges and volume per discharge.
 - g). List of chemicals that may be added to septage by pumper or contractor.
 - h). Copy of MSDS for any such listed chemicals.
 - i). Any other information required by the City to evaluate the application.

- 15.6 Septage system discharge will be accepted at the wastewater treatment facility during normal operating hours Monday-Friday, and on an after-hours basis, when practical. No septage system pumpings shall be discharged into the City's treatment facility or collection system without an approved and accepted Septic Discharge Manifest. All discharges into the wastewater system shall be supervised by an authorized City employee.
- 15.7 The fees for the discharge of septage into the treatment facility or collection system shall include categories for disposal of septage from within the City limits; outside the City limits and for after-hour disposal services. Such fees shall be established by the City Council, after recommendation by the Board of Public Utilities.

16. **ION-EXCHANGE TREATING DEVICES**

- 16.1 No ion-exchange treating device shall be installed, enlarged, used, replaced or regenerated in the City, and no wastewater from an ion-exchange water treating device shall be discharged to the soil or to a storm channel in the City, or to the City wastewater collection and treatment system unless:
- 16.1.1 Said device is a softener qualifying for registration under Section 16.3 and duly registered; or
- 16.1.2 A permit for said installation, enlargement, use, replacement, or regeneration has been obtained from the City as provided in Section 16.4 and 16.5, and the operation conforms to the terms of said permit.
- 16.2 It shall be a misdemeanor for anyone to offer on-site regeneration softeners for sale or rent in the City, or to solicit an owner or occupant of property in the City to purchase or rent such a unit, or to install a softener with provision for on-site regeneration except where the purchaser or renter holds a valid permit from the City for such installations. The penalties for making such a sale, rental or installation includes the requirement that the party remove the illegally installed unit, and that the vendors business license be suspended.
- 16.3 An ion-exchange water treating device having a total volume less than four cubic feet and having facilities for on-the-premise regeneration which was in service on March 1, 1994, is required to have been registered with the City within ninety days after said date. A duly registered device may be continued in use; provided, however, that no more than one hundred fifty pounds of salt per month are used in regenerating such device. This provision does not extend to the enlargement or replacement of such device or its transfer to another property. Any enlargement, replacement or transfer shall be considered as a new installation.
- 16.4 A permit is required for the installation, enlargement, use replacement or regeneration of any ion-exchange water treating device in the City if such device does not qualify for registration under Section 16.3. A permit may be granted only if none of the regenerating chemicals will be discharged to the City wastewater collection and treatment facility, storm channel, and/or the earth.
- 16.5 Any person desiring a permit for the installation, enlargement, use, replacement or regeneration of an ion-exchange water treating device shall apply to the City and shall submit information to support claims that the proposed operation will conform to the qualifications of Section 16.4, and such other information as may be requested. If the City finds that the information furnished by the applicant is sufficient to show that the operation meets the qualifications of Section 16.4, a permit shall be issued. The permit shall state the conditions that the applicant must meet and may include a requirement that the applicant submit periodic reports to the City. The required frequency of the reports and the contents thereof shall be as determined by the City. The permit may also include a requirement that the applicant install facilities for convenient sampling of the wastewater stream.
- 16.6 City may revoke the permit for any ion-exchange treatment device, if the permittee violates any of the requirements of Section 16.

17. **CURTAILMENT** - When the availability of service is restricted and a reduction of service is required to maintain the integrity of part or the total wastewater collection and treatment system, the Customer will be notified by the City to reduce or terminate use of service. Such notifications may be made by mail, phone, or in-person. The City will curtail service on a proportionate basis, where possible. Customers, who refuse or do not comply with curtailment requirements, may be terminated by the City. A service re-establishment charge of \$200.00 will be assessed for a first time violation, \$500.00 for second violation, and \$1000.00 for a third violation. A Customer who violates curtailment requirements more than three times may not be allowed to reestablish service.
18. **SUCCESSORS AND ASSIGNS** - Agreements for service shall be binding upon and for the benefit of the successors and assigns of Customer and City, but no assignments by Customer shall be effective until Customer's assignee agrees in writing to be bound and until such assignment is accepted in writing by the City.
19. **WARRANTY** - There are no understandings, agreements, representations or warranties, expressed or implied (including warranties regarding merchantability or fitness for a particular purpose), not specified herein concerning the sale and delivery of wastewater treatment and collection services by the City to the Customer. These Terms and Conditions state the entire obligation of the City in connection with such services.

APPENDIX L

Utility Memos

MEMO

To: City of Needles

From: Michael Hartvigsen, P.E.

Cc: Don Olsen, P.E.,

Date: 7/22/2022

Re: Riverlux Development Water and Sewer Impact Analysis Memo

We have modeled the culinary water and sewer demands for the proposed Riverlux Development (Development), and evaluated how the new demands will affect the existing water and sewer systems of the City of Needles (City).

Assumptions

Based on the preliminary design information provided to the City, the following assumptions have been utilized in modeling the development's impact on the City's culinary water system:

- The average daily demand per household is 300 gallons
- A peaking factor of 1.5 was applied to the average 0.21 gallons per minute (gpm) which equates to 0.32 gpm per household.
- A pipe network of 8-inch pipe was assumed for each road way identified in Tentative Tract No. 20478
- The Development will connect onto the City's water system at or near the intersection of K street and Needles Highway
- Pipe lengths have been obtained using the Tentative Tract No. 20478

The following assumptions have been made for the sewer model.

- The average household will drain 210 gallons of water per day which equates to 0.15 gpm.
- Pipe sizes and lengths have been obtained from Tentative Tract No. 20478

Culinary Water Demands

The results of the water system analysis indicate that the City's culinary water system has sufficient source and storage capacity to meet the anticipated water demands added by the proposed development. The distribution pipe network is sufficiently sized for the peak day demands of the development.

Fire Flow Analysis

The Development was modeled for fire flows at varying points within the Development. A fire flow of 2,000 gpm for 2 hours during the peak water usage time of day. If any portion of the water system's pressure in or near the Development dropped below 20 psi during the fire flow time then we considered the fire flow to be inadequate.

With the assumption that all new piping would be 8-inch, the portion of the development south of Needles Highway will not have any issues meeting the demands of this fire flow. All of the system pressures nearby stayed above 50 psi.

The portion of the Development north of Needles Highway, however, did not meet the fire flow demands. Multiple spots within the north portion of the Development recorded system pressures below 20 psi. The fire flow for this Development as currently designed is inadequate.

There are two options that the Development can do to meet the fire flow demands for the north portion.

1. The development can install a 10-inch pipe from the intersection of K Street and Needles Highway to the entrance of the Development instead of an 8-inch pipe.
2. The development can loop the pipe in the north portion of the Development.

For water quality and maintenance reasons, we recommend going with the second alternative.

Sewer Demands

The proposed design for the wastewater collection system at the Development has all the new flows being diverted into a new lift station near the south west corner of the development, which then pumps directly into the existing K Street Lift Station. In reviewing the capacity of the K Street lift station, the City staff indicated that there are times when the lift station is running both pumps for extended periods of time. This event appears to coincide with the operation of the private lift station located at the Needles Marina just east of the proposed development. Upon further investigation, we determined that the Marina lift station was designed with large volume pumps and that the operators were maximizing the length in between run cycles of the pumps. These operational procedures are concerning for several reasons.

The first concern is that the sewer is likely going septic while it is being stored. This is then very difficult for the City's treatment plant to handle and can cause damage to the collection system due to the gas produced by this process. We were unable to confirm what the pumping cycle actually was, but we were told that it could be as infrequent as once every week.

The second concern is the volume of sewer that is being pumped in each cycle. The Marina lift station has two Gorman Rupp pumps that were originally built in 1985. Based on the memory of the operator, these pumps were capable of pumping somewhere in the 200 to 300 gallons per minute range. If those flow rates are correct, then operating the pumps for more than about 9 minutes would overwhelm the capacity of the K Street lift station. Recently, we were told that these pumps were taken offline for repairs and that a small trash pump was installed. City staff indicated that the K Street lift station has not been overwhelmed since that time. This supports the higher pumping rates indicated by the operator and is a concern for the City.

Based on these findings, we recommend that the City work with the Needles Marina to determine the actual pumping capacity of their pumps and limit their run time to a duration that can be managed by the K Street lift station. This will free up enough capacity in the K Street lift station for the anticipated demands of the proposed development and prevent the Marina flows from becoming septic.

With these improvements to the operation of the Marina lift station, we believe that the K Street lift station is nearly at capacity. With the addition of the new flows from the Riverlux development there is a potential for the flows to exceed the design capacity of the lift station. Having reviewed the design of the lift station however, there is a possibility of upsizing the existing pumps slightly to accommodate the new flows without completely replacing the lift station and the force main. Based on these findings, we recommend following improvements:

- Re-route all flows from the development to a lift station near the main entrance area on Needles Highway (River Road on Tentative Tract No. 20478). The lift station should not be located in the roadway if at all possible. The lift station will need to be designed such that it will cycle at least once per day to prevent it from going septic.
- The developer may complete one of the following alternatives for the discharge of the force main from the new lift station:
 - Alternative 1: The force main shall be routed to the existing manhole in Needles Highway between K Street and River Road. This will require the existing 6-inch sewer pipe to be upsized from a 6-inch to an 8-inch pipe in between K Street and the discharge manhole.
 - Alternative 2: The force main shall be routed to the existing manhole in the intersection of Needles Highway and K Street, with the force main sloping to that manhole as much as possible to drain the line.
- Replace the existing pumps in the K Street lift station with slightly larger pumps capable of pumping 4 ft/sec through the 4-inch force main. This upsize will require an evaluation of the existing system to verify this upgrade is feasible or if any other components system need to be upgraded.

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08/04/2022

RIVERLUXRESORT/TRI-STATE ADVERTISING
29991 Canyon Hills Road Suite 1709 PMB-300
Lake Elsinore, CA. 92532

Please accept this **electronic communication document** as an amended fixed appliance load calculation sheet converting watts into kilowatts per the request of City of Needles.

Total Sq. Ft 2000
3 Watts Per Sq. Ft.
*Total Watts= 6,000

FIXED APPLIANCE LOAD (RV GARAGE)

CATEGORY	DESCRIPTION	WATTS (W)
Appliance	Dishwasher	1350
Appliance	Garbage Disposal	840
Appliance	Microwave	1100
Appliance	A/C	4600
GRANDTOTAL		7890

*Total Watts	6000
GRAND TOTAL	<u>+7890</u>
	13890
First 3000 Watts 100%	<u>-3000</u>
	10890

Balance 35%	3812
Re-Add Original 3000	<u>3000</u>
	6812Watts
÷230 Volts	
=	30 AMPS

40 (x6812) RV Garage Units = 272480 Watts
20 (x6000) RV Garages = 120000 Watts
TOTAL= 392480 Watts

÷230 Volts =1706 AMPS Per Leg / **TOTAL MEGAWATTS=0.001706**

60 (x7463) Homes 447000 Watts
TOTAL= 444700 Watts

÷230 Volts =1946 AMPS Per Leg / **TOTAL MEGAWATTS=0.00194**

OVERALL TOTAL LOAD IN MEGAWATTS FOR RIVERLUX RESORT IS 0.003653