COUNTY OF LAKE
COMMUNITY DEVELOPMENT DEPARTMENT
Planning Division
Courthouse - 255 N. Forbes Street
Lakeport, California 95453
Telephone 707/263-2221 FAX 707/263-2225

December 15, 2022

CALIFORNIA ENVIRONMENTAL QUALITY ACT ENVIRONMENTAL CHECKLIST FORM INITIAL STUDY 22-37

1. Project Title:	Lucerne Harbor Dredging Project
2. Lead Agency Name & Address:	County of Lake Community Development Department, Planning Division 255 North Forbes Street Lakeport CA 95453
3. Contact Person & Phone Number:	Laura Hall, Senior Planner (707) 263-2221
4. Project Location:	6215 E. Hwy 20, Lucerne, CA 95458
5. Applicant/Address:	County of Lake Public Services Department /333 Second Street Lakeport, CA 95453
6. General Plan Designation(s):	Public Facilities PF, Resource Conservation RC
7. Zoning Designation(s):	"O"-"FF"-"WW"-"SC"-"P" Open Space District-Floodway Fringe-Waterway-Scenic Combining-Parking
8. Permit Numbers:	Grading Permit (GR 22-36); Initial Study (IS 22-37)
9. APN(s)/Acreage:	034-121-11 & 034-141-01/ 1.575
10. Supervisor District:	District 3
11. Slope:	0-3%
12. Fire Hazard Zone:	High Fire and Non-Wildland/Non-Urban Severity Zone
13. Earthquake Fault Zone:	N/A

14. Dam Failure Inundation Area: N/A

15. Flood Zone: 0.2 PCT Annual Change Flood Hazard, and AE- The base floodplain where Base Flood elevations are provided

16. Fire Protection District: Northshore (CAL FIRE)

17. Site Visit(s): December 8, 2021 & July 8, 2021

18. Acronyms:

APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CR	Resort Commercial
dB	decibels
DR	Design Review
FF	Floodway Fringe
FRAP	Fire and Resource Assessment Program
HDR	High Density Residential
IS	Initial Study
LCAQMD	Lake County Air Quality Management District
MND	Mitigated Negative Declaration
NGVD	National standard reference datum
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
O	Open Space
P	Park
PM2.5	Particulate Matter 2.5
PM10	Particulate Matter 10
R3	Multi-Family Residential
RWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SC	Scenic Combining
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle Miles Traveled
WW	Waterway

19. Background

Application CE 21-37 was submitted by the Lake County Public Services Department (applicant) to the Community Development Department, Planning Division on July 6, 2021, for maintenance dredging of the boat ramp channel at the Lucerne Harbor Park. Initially, California Code Title14, Division 6, Section 15304 (g) was applied to the proposed project. However, after sending out

request for reviews to responsible agencies and the tribal government on July 6, 2021, and receiving a request for Tribal consultation by the Robinson Rancheria on July 27, 2021, the project application was changed to include an initial study (new project number Grading Permit 22-36; Initial Study IS 22-37). Tribal consultation began on December 8, 2021, and concluded on September 26, 2022, with a signed Monitoring Agreement between the County and Robinson Rancheria. Pursuant to subdivision (r) of Section 6254 of, and Section 6254.10 of the Government Code, and subdivision (d) of Section 15120 of Title 14 of the California Code of Regulations, both the cultural report and monitoring agreement for this project remain confidential.

20. Determination

Pursuant California Code of Regulations Title 14, Chapter 3, Article 5, Section 15063, the County has prepared a Mitigated Negative Declaration (MND) for the proposed project. Per Section 15105, "When a proposed negative declaration or mitigated negative declaration is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 30 days, unless a shorter period, not less than 20 days, is approved by the State Clearinghouse". Depending on comments received by interested agencies, stakeholders, and the public, this proposed MND is subject to change. The County has determined the proposed project would not have a significant impact on the environment because: The project would have no impact on Agriculture/Forestry Resources and Recreation; a less than significant impact on the following: Aesthetics, Air Quality, Biological Resources , Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards & Hazardous Materials, Hydrology and Water Quality, Land Use/ Planning, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Transportation, Utilities/Service Systems, Wildfire, Public Services; and a less than significant impact with mitigation incorporated on Cultural Resources and Tribal Cultural Resources. Attachment A includes the Mitigation Monitoring and Reporting Program.

21. Environmental Setting/Existing Conditions

The project site is located within the Rodman Slough-Frontal Clear Lake Sub Watershed (Hydrologic Unit Code 180201160307) which is approximately 18,128 acres. This sub watershed is located within the Cache Creek Watershed which consists of approximately forty percent of the County's drainage area. The project site has a Mediterranean climate, with cool intermittently wet winters and hot dry summers. The average annual precipitation is 24 inches (Lake County Community Development Department, 2009). The harbor remains closed due to sediment buildup and low water conditions resulting from drought. As of November 27, 2022, the only remaining water was in the deeper channel near the outer break water.

Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary)

Project Location

Lucerne Harbor Park is located in the unincorporated community of Lucerne in Lake County approximately 132 north of San Francisco and 110 miles west of Sacramento. The park is accessed

from State Highway 20 on the northeast side of Clear Lake. The physical address is 6215 E. Hwy 20, Lucerne, CA 95458.

Project Description

The County of Lake is proposing a maintenance dredging project to remove approximately 2,500 cubic yards of sediment from Lucerne Harbor in the Lucerne Harbor Park. Site Photos taken on July 8, 2021, begin on page 9. Figure 1 includes an aerial photo of assessor's parcel numbers (APNs) 034-121-11 & 034-141-01 outlined in yellow. Figure 2 includes dredging plan sheet C-1 which is an aerial photo showing three profiles of the water surface on the date of surveying, and the existing ground or lakebed with other information. Sidewall sediment will be excavated at a slope 2.5:1 with an approximate entrance width of 20 ft. Shifting sediment will occur over time and future maintenance will be required. The dredge site encompasses an area of approximately 0.8 acres. Dredging is anticipated to be accomplished using a floating clamshell dredge paired with one to two barges pushed by a shallow water tugboat. Dredge depth will be to approximately the original design depth of 1316 feet National standard reference datum (NGVD) with a 6-inch maximum over dredge allowance. Material dredged from the harbor will be loaded onto a barge using the dredge backhoe and then the loaded barge will be pushed to the boat ramp area by the tugboat. At the boat ramp area, the dredged material will be loaded into dump trucks using an excavator located on the shore. Much of the water will decant from the dredged material during this initial transfer to the trucks. The County will close portions of the park in the area of the harbor during dredging operations.

A turbidity curtain will be installed by the contractor at the harbor entrance during the dredging work to prevent any sediment from returning to the lake. The system would be installed and relocated based on the area of work. The deepest depth of in-water work for this project is less than 5 feet. The length of the curtain can be adjusted by adding or removing sections. A turbidity curtain is a temporary Best Management Practice (BMP) that can be adjusted and relocated to accommodate the area of work. A floatation boom and bottom ballast keep the curtain vertical in water. For work at the harbor entrance, the curtain would be relocated to enclose the excavation area using the piers or nearby shoreline if necessary. Water conditions will be monitored for turbidity prior to and during the project operations. Water board guidance in previous dredging operations prohibit 20% increase from existing background conditions. For a turbidity curtain to be removed, these conditions would have to be met.

The expected functional use of the harbor after this dredging will be more than 30 years based on previous depositional rates. The source of deposited sediment is from open water as no surface water drainage is directed to the harbor.

Construction Timing

To protect the state-listed threatened Clear Lake hitch, the work period for the dredging will be confined to periods when the water level in Clear Lake is below a Rumsey Gauge height of 3.5 feet (1321.8 NGVD). The water level in Clear lake is expected to be below Rumsey Gauge 3.5 during the planned work window. Should these expected conditions change, work will be reevaluated for potential rescheduling.

Deposal of Dredged Materials

Dredged material is proposed for disposal and drying at the Eastlake Sanitary Landfill in Clearlake, CA. Saturated sediments will be transported to Eastlake Landfill from the project site in lined truck beds or self-contained roll-off bins to prevent leakage while in route. The landfill has a soil borrow area that will be used as a drying area for the dredged material and will require the installation of silt fence and/or the use of straw wattles surrounding the disposal area to ensure any residual water or sediments are contained onsite while the material undergoes a period of further drying. Once the material has dried sufficiently the dredge material will be used for daily landfill cover and other on-site beneficial reuse purpose in accordance with the landfill permits.

Construction Details

There are two driveway encroachments into Lucerne Harbor Park from State Highway 20. The western-most driveway will be closed to the general public and used only for hauling operations. Barricades, cones, and other standard traffic control measures will be in place to alert the public.

The anticipated work sequence will be as follows:

1. Mobilize equipment to the site.
2. Install turbidity curtain at harbor entrance to the lake.
3. Launch clamshell dredge(s), barge(s), and tugboat.
4. Remove sediment from the harbor and bring material to boat ramp for hauling and disposal at Eastlake Sanitary Landfill.
5. During removal, conduct intermediate surveys to verify dredge quantities.
6. After removal, conduct final survey and calculate total volume removed. Volume to be calculated at the nearest cost/cubic yard interval.
7. Remove turbidity curtains, demobilize, and site cleanup.

22. ***Surrounding Land Uses and Setting: Briefly describe the project's surroundings***

The proposed project conforms to the Lake County General Plan and Zoning Ordinance. The project would only include dredging activities.

Surrounding Land Uses/General Plan and Zoning Designations

	North	East	South	West
Surrounding land uses	Lakeside Art & Gifts	Lake County Sheriff's Office and Grillagan's Island	Vacate Land	Clear Lake
Surrounding general plan designations	Resort Commercial Cr- Resource Conservation RC	High Density Residential HDR	Public Facilities PF-Resource Conservation RC	N/A
Surrounding zoning designations	"CR"-"FF"-"WW"-"P"-"DR" Resort Commercial-	"R3"-"SC"-"P", Multi-Family	"O"-"FF"-"WW"-"SC"-"P" Open Space-Floodway	N/A

	Fringe-Waterway-Park-Design Review	Residential-Scenic Combining-Parking	Fringe-Waterway-Scenic Combining-Parking	

Source: Lake County General Plan, 2008; Lake County Zoning Ordinance, 2014.

23. Other public agencies whose approval is required (e.g., Permits, financing approval, or participation agreement.)

The proposed project may be subject to obtaining the following federal and state permits:

1. Central Valley Regional Water Quality Control Board (RWQCB)- 401 Permit
2. Central Valley (RWQCB)- Report of Waste Discharge (RWD) under R5-2018-0085 or R5-2022-0052
3. U.S. Army Corps of Engineers - 404 Permit
4. CA Department of Fish and Wildlife - 1602 Permit Stream Alteration Agreement

24. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Pursuant to Public Resources Code Section 21080.3.1, the Lake County Community Development Department sent a formal notification on July 6, 2021, to the Robinson Rancheria which is the traditionally and culturally tribal nationaffiliated with the project area. The California Historical Resources Information System of Sonoma State was also notified and made recommendations that included having an assessment prepared by a qualified professional archaeologist, conducting a field study, and having the lead agency contact the tribes. As recommended, DZC Archaeology & Cultural Resource Management was hired by the County to prepare the report which provides findings and conclusions. The report includes an investigation of archaeological resources in and around the project site, a records search, and pedestrian survey and consultation efforts. Consultation with the Tribal government occurred on December 8, 2021, and there were noted concerns from the tribe. As a result of communicating and working with the Tribal government, the County has a Standard Monitoring Agreement with the Tribes that was signed on September 26, 2022.

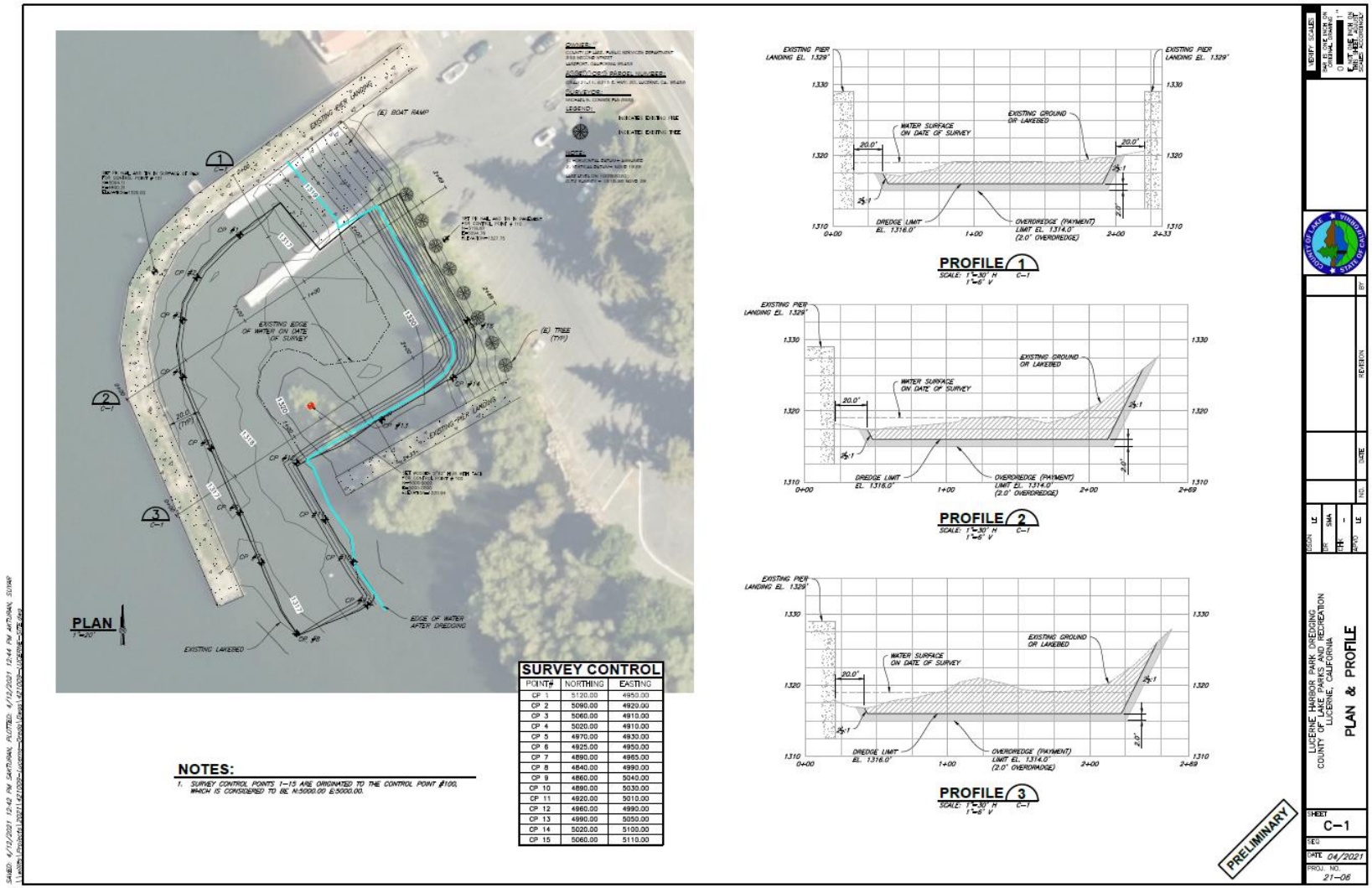
25. Initial Study Attachments

- Attachment A: Mitigation Monitoring and Reporting Program
- Attachment B: Sediment Characterization Work Plan, Lucerne Harbor Park Boat Ramp Maintenance Dredging, Lake County, California
- Attachment C: Noise Impacts Related to Lake Restoration Activities at Lake Kittamaqundi and Lake Elkhorn

Figure 1: Project Site Aerial Map

Source: County of Lake GIS Portal, 2022.

Figure 2: Lucerne Harbor Dredging Project Plan and Profile



Source: County of Lake Public Services, 2021.

Site Visit Photos (July 8, 2021)

Photo 1: View from the boat launch

Photo 2: View of harbor entrance

Site Visit Photos (July 8, 2021) Continued

Photo 3: View of harbor entrance

Photo 4: View from the end of the pier

Site Visit Photos (July 8, 2021) Continued

Photo 5: View of the harbor and parking lot

Photo 6: View of the boat launch

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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 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.

Initial Study prepared by:
Laura Hall, Senior Planner

Laura Hall
SIGNATURE

Date: 12/15/22

Mireya G. Turner, Director
Community Development Department

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) 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 (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of 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, and 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 XVII, "Earlier Analyses," may be cross-referenced).

5) 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:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, 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.

   i) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

   ii) 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.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

KEY: 1 = Potentially Significant Impact
2 = Less Than Significant with Mitigation Incorporated
3 = Less Then Significant Impact
4 = No Impact

IMPACT CATEGORIES*	1	2	3	4	All determinations need explanation. Reference to documentation, sources, notes and correspondence.	Source Number
I. AESTHETICS ***Except as provided in Public Resources Code Section 21099, would the project:***						
a) Have a substantial adverse effect on a scenic vista?			X		The project site is zoned with the Scenic Corridor "SC" designation in Article 34 of the Lake County Zoning Ordinance. According to Section 34.2, Clear Lake and any convenient visual access from a state highway are characteristics that must be considered in the district. In addition, the Shoreline Communities Area Plan addresses scenic corridors beginning on page 3-47 (Lake County Community Development Department, 2009). The entire length on State Highway 20 is identified as a potential scenic highway. Currently, due to low water conditions and sediment accumulations, the boat ramp has been closed off with barricades and signage. These measures are required to prevent accidents and for public safety. Construction equipment needed for dredging will add to the temporary visual impacts of the site. However, after the dredging activities are complete and construction equipment and barricades and signage are removed, the scenic vista would be improved. **Less than Significant Impact**	21
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X		Although State Highway 20 is on the List of Eligible and Officially Designated State Scenic Highways List, it is not on the Caltrans List of Officially Designated County Scenic Highways (California Department of Transportation, 2015). **Less than Significant Impact**	9
c) 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?			X		Please see response to Section I. a). **Less than Significant Impact**	21.
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X		Work will be conducted during daylight hours. The project is not anticipated to create additional light or glare onto State Highway 20. Also see Section I (a) response. **Less than Significant Impact**	24

II. AGRICULTURE/FORESTRY RESOURCES *Would the project:*						
a) 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?				X	The project site is classified as Urban and Built-Up which is defined as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures (California Department of Conservation, 2018). **No Impact**	4
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	Please see response to Section II (a). The proposed project only includes dredging of the harbor. There is no request for a zone change, and there are no known Williamson Act contracts on any of the adjacent surrounding properties. **No Impact**	4
c) 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))?				X	Forest land as defined under Public Resource Code 12220(g) is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Also see responses to Section II (a) and (b). **No Impact**	4
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X	See Section II (c). **No Impact**	4
e) 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?				X	See Section II (c). **No Impact**	4
III. AIR QUALITY *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.* *Would the project:*						
a) Conflict with or obstruct implementation of the applicable air quality plan?			X		Lake County Air Quality Management District (LCAQMD) is a full attainment district for criteria air pollutants and therefore has not adopted an air quality plan (Lake County Air Quality Management District, 2022). **Less Than Significant Impact**	21
b) Result in a cumulatively considerable net increase of			X		The California Air Resources Board defines criteria air pollutants as air pollutants for which acceptable levels of exposure can be determined and	3

any criteria pollutant for which the project region is non-attainment under and applicable federal or state ambient air quality standard?					were an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM10 and PM2.5 (California Air Resources Board, 2022). The applicant will obtain a grading permit as required under the Lake County Municipal Code Chapter 30. The grading permit contains conditions of approval that includes best management practices (BMP) for air quality in compliance with the LCAQMD's rules and regulations for PM10 and PM2.5 as well as other criteria air pollutants. Additionally, construction activities would be temporary. **Less Than Significant Impact**	
c) Expose sensitive receptors to substantial pollutant concentrations?			X		According to the California Air Resources Board "Sensitive receptors are children, elderly, asthmatics and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. The locations where these sensitive receptors congregate are considered sensitive receptor locations. Sensitive Receptor locations may include hospitals, schools, and day care centers, and such other locations as the air district board or California Air Resources Board may determine [California Health and Safety Code § 42705.5(a)(5)]". Lucerne Elementary School is approximately 0.7 miles from the project site. The Lucerne Alpine Senior Center is directly across the street from the project site. Construction activities could result in dust, but as mentioned in Section III b), the applicant would have to comply with BMPs attached to the grading permit. **Less Than Significant Impact**	3
d) Result in other emissions (such as those leading to odors or dust) adversely affecting a substantial number of people?			X		See Section III b) and c). **Less Than Significant Impact**	21, 3
IV. BIOLOGICAL RESOURCES *Would the project:*						
a) 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 Game or U.S. Fish and Wildlife Service?			X		The Clear Lake Hitch (*Lavinia exilicauda chi*), a state listed Threatened species, is found in Clear Lake and its tributaries. Other Species of Special Concern found in the Clear Lake includes the Sacramento perch (Archoplites interruptus) and the Clear Lake tule perch (Hysterocarpus traskii lagunae) (California Department of Fish and Wildlife, 2022). Dredging would occur in Clear Lake where the Hitch is found. As mentioned in the project description, in order to protect the hitch, the work period for dredging will be confined to periods when the water level in Clear Lake is below a Rumsey Gauge height of 3.5 feet (1321.8 NGVD). The water level in Clear lake is expected to be below Rumsey Gauge 3.5 during the planned work window of October-December. If conditions change, the work will be reevaluated for potential to reschedule. **Less Than Significant Impact**	8

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X		A Request for Review was sent to the California Department of Fish and Wildlife on July 12, 2021. Environmental Scientist Ben Ewing commented on July 9, 2021, that due to the location and time the work is proposed to be done, he did not have any issues with the Lucerne Harbor Dredging Project. Also see response to Section IV. a). **Less Than Significant Impact**	8
c) Have a substantial adverse effect on state or federally protected wetlands (including, not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X		Clearlake has a Classification code L1UBK under the National Wetlands Inventory (U.S. Fish and Wildlife, 2022). As a result, the applicant will be required to apply for the appropriate permits from the United States Army Corps of Engineers. **Less Than Significant Impact**	30
d) 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?			X		See response to Section IV. a) and b). **Less Than Significant Impact**	8, 30
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X	The project is not proposing the remove of trees, so there would be no conflict with the County's rules and regulations for tree protection. **No Impact**	24
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X	Lake County does not have a Habitat Conservation Plan or Natural Community Conservation Plan. **No Impact**	-
V. CULTURAL RESOURCES *Would the project:*						
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?		X			California Code of Regulations, Title 14, Section §15064.5 provides a definition of what a historical resource is. Among many other things, a resource is any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. A Request for Review was sent out to the Northwest Information Center (NWIC) for comments on July 6, 2021. A response letter was received on August 4, 2021. The letter stated there is no records of any previous cultural resource studies by a professional archaeologist or architectural	17

					historian for the proposed project area. The NWIC recommended that the lead agency contact the Tribes. In addition, 3 to 4 buildings were noted in the proposed project area that if present, would meet the Office of Historic Preservation's minimum age standard that buildings, structures, and objects that are 45 years of age or older may be of historical value. These buildings appear to be located on the adjacent lot behind the restroom facility which is located on the project site's lot. According to the Community Development Departments historic records, the building was constructed on March 8, 1976. Remodeling has occurred since that time. Due to the distance of approximately 85 feet from construction activities, the building would not be impacted. DZC Archaeology & CRM Consulting prepared a cultural report on October 2022. The results of the archaeological survey, archival research, and tribal outreach are included in the report. Pursuant to California Code Regulations Section 15120 (d), and Public Resources Code Sections 5097.9, 5097.993, the cultural report is not available for public viewing. Due to the potential for unknown impacts to an archaeological resource, the following mitigation measures are recommended for project implementation. Please note that APE is the Area of Potential Effect: **CUL-1**: Archaeological and Tribal Monitors will be present during earth disturbing activities related to the Project within the APE. **CUL-2**: Resources in, or adjacent to, the APE will be flagged for identification and avoidance, the extent of which is at the discretion of the on-site archaeologist. **CUL-3**: Cultural material recovered during earth-disturbing activities shall be retained by the Robinson Rancheria for the duration of the Project. **CUL-4**: Following the conclusion of Project activities, recovered cultural material shall be re- interred at a local of the Tribes choosing and, in a manner, consistent with their cultural practices. **Less than Significant with Mitigation Incorporated**	
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?		X			See Section V. a). **Less than Significant with Mitigation Incorporated**	17
c) Disturb any human remains, including those interred outside of formal cemeteries?		X			The Lake County Municipal Code Chapter 30, Section 30-8 has requirements for cultural resources. The State of California Native American Heritage Commission has a list of State Laws and Codes which includes human remains that can be found here: https://nahc.ca.gov/codes/state-laws-and-codes/. The federal government addresses the handling of human remains in the Native American Graves Protection and Repatriation Act. DZC Archaeology & CRM Consulting has listed what is required at all levels of government in the cultural report. Please see mitigation measures listed in Section V a).	

					Less than Significant with Mitigation Incorporated	
VI. ENERGY *Would the project:*						
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X		Construction activities would result in short-term consumption of fossil fuels in construction vehicles and equipment. California regulation (13 California Code of Regulations, Section 2449[d][3], 2485) will limit idling of diesel-powered equipment. In addition, the applicant will have to comply with all State and federal requirements for energy waste including meeting certain standards for construction equipment. Lastly, dredging the harbor would not result in an increase of energy waste related to an increase in use as the number of boats is not expected to exceed the historical use. **Less than Significant Impact.**	24
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X		Please see Section VI. a). **Less than Significant Impact.**	17
VII. GEOLOGY/SOILS *Would the project:*						
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 3) 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. 4) Strong seismic ground shaking? 5) Seismic-related ground failure, including liquefaction? 6) Landslides?			X		Pursuant to the Alquist-Priolo Earthquake Fault Zoning Act of 1972, the State is required to delineate regulatory "Zones of Required Investigation". There are certain development requirements for projects in these zones. The "Alquist-Priolo Earthquake Fault Zones prevent buildings for human occupancy from being constructed upon active faults" (California Department of Conservation, 2019a). According to the State's "Earthquake Zones of Required Investigation" mapping database, the project site is not located are within an Earthquake Fault Zone. However, the Konocti Bay Fault is located approximately 7 miles south of the project site and the Bartlett Springs Fault is approximately 11.4 miles to the north (California Department of Conservation, 2019b). The project is not proposing any for human occupancy. California Geological Survey Map Sheet 48 (revised 2016) shows potential seismic shaking based on National Seismic Hazard Map calculations plus amplification of seismic shaking due to the near surface soils. The proposed project site is located in a region threat is at risk of increasing intensity for earthquake shaking potential (State of California, Resources Agency, Department of Conservation, 2016). The project site is located on flat ground and there are no hillsides nearby. **Less than Significant Impact**	5, 6, 28
b) Result in substantial soil erosion or the loss of topsoil?			X		The project includes dredging the harbor to remove approximately 2,500 cubic yards of sediment accumulation. Pursuant to the Lake County Municipal Code Chapter 30, the applicant will have to apply for a grading permit which includes BMPs for soil erosion and sediment control. In addition, dredging in the Nation's navigable waters also requires that the applicant apply for a 404 permit from the United States Army Corps of	24

					Engineers and a 401 certification from the Central Valley Regional Water Quality Control Board. **Less Than Significant Impact**	
c) 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-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		See Section VII a) for information on landslides. The project site is not included on the United States Geological Survey' map of Areas of Land Subsidence in California (United States Geological Survey, 2022). **Less Than Significant Impact**	24, 29
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X		According to Web Soil Survey, the site includes Still loam, stratified substratum and Water. If this soil type is found on the bed of Clear Lake in this area, then the soil profile shows loam at 0 to 6 inches, and then stratified loam to clay loam at 6 to 52 inches (Natural Resources Conservation Service, 2019). Clay soils exceeding a certain percentage can be considered expansive. As proposed however, the project includes maintenance dredging only with no construction of structures. In addition, the boat ramp is existing and has been in use for several years. **Less than Significant Impact**	24, 26
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?			X		See Section VII d). **Less Than Significant Impact**	26
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X		See Section V b). **Less than Significant Impact**	24
VIII. GREENHOUSE GAS EMISSIONS *Would the project:*						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		Dredging will require construction equipment. Construction activities would be temporary. The LCAQMD does not currently have any adopted greenhouse gas emissions thresholds for projects undergoing a CEQA analysis, but recommends the Bay Area Air Quality Management District (BAAQMDs) thresholds of significance contained within the district's CEQA Air Quality Guidelines (Lake County Air Quality Management District, 2022). However, the BAAQMD doesn't currently have thresholds for greenhouse gas emissions for construction projects. According to the BAAQMD, Greenhouse gas emissions from construction represent a very small portion of a project's lifetime greenhouse gas emissions (Bay Area Air Quality Management District, 2022). **Less than Significant Impact**	21, 1

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		This project will not conflict with any adopted plans or policies for the reduction of greenhouse gas emissions**.** Construction activities would be temporary. **Less than Significant Impact**	24
IX: HAZARDS & HAZARDOUS MATERIALS *Would the project:*						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X		Dredging materials will be disposed of at the Eastside Landfill in Clearlake. Before deposal of dredging materials, on behalf of the County consulting firm SHN has prepared a work plan for characterization of sediments at the site where maintenance dredging will occur (as required by the California Water Code, Section 13260). The plan was submitted to Stephanie Tadlock at the Central Valley Regional Water Quality Control Board (RWQCB) on July 13, 2021. The work plan will use composite sampling prior to dredging to evaluate the chemical quality of the sediment and determine dredged material suitability for final placement. The County will provide a suitability assessment report to the RWQCB as well as sampling results for discussion purposed prior to initiating dredging activities (SHN, 2021). Methods and procedures are discussed in the report (Attachment B). All discharges from the project will have to comply with federal, State, and local regulations, which includes, but is not limited to the Clean Water Act. **Less than Significant Impact**	27
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X		Hazardous materials would be used during maintenance dredging such petroleum-based fuels, however, implementation of BMPs stipulating proper storage and handling of equipment refueling would be implemented during dredging and placement activities as a standard requirement. Also, any hazardous or toxic materials that could be harmful to aquatic life shall be contained in water tight containers or removed from the site. With implementation of BMPs, there would be no impacts. Also see Section IX a). **Less than Significant Impact**	24
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X		Lucerne Elementary School is approximately 0.8 miles south of the project site (Google Map, 2022). No work would occur outside of the project area which will be closed off to the public. Petroleum emissions from dredging equipment would be minimal. Dredged materials will be disposed of at the Clearlake Landfill. **Less than Significant Impact**	19
d) 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,			X		An EnviroStor search was completed for the project site on December 2, 2022, and there were no hazardous materials sites within 0.5 of the project site (Department of Toxic Substances Control, 2022). **Less than Significant Impact**	14

would it create a significant hazard to the public or the environment?						
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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?			X		According to the Lake County Airport Land Use Compatibility Plan, there are three airports that include the Lampson Field, Pearce Field, and the proposed Quackenbush Mountain Airport. None of these airports are within 2 miles of the project site (Hodges & Shutt, 1992). Additional public and private airports include: Redbud Community Hospital Heliport - CL53, Ferndale Resort Seaplane Base - CN20, Konocti - Clear Lake Seaplane Base - 5CA9, Sutter Lakeside Hospital Heliport - CL69, and the Gravelly Valley Airport - 1Q5 which is the closest airport located in Upper Lake, but still is several miles away. **Less than Significant Impact**	20
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X		State Highway 20 would remain open and the Lucerne Harbor Park would remain accessible to the public and emergency responders. Only the project site will be closed off to the public. **Less Than Significant Impact**	24
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X		The site is mapped as being in High and Non-Wildland/Non-Urban Fire Hazard Severity Zones (CAL FIRE, 2022). The majority of construction activities would occur in the water. The project is not proposing activities that would result in wildfires. **Less than Significant Impact**	2
X. HYDROLOGY AND WATER QUALITY *Would the project:*						
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X		California Water Code Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the State, must file a report of waste discharge. Waste discharges that can be exempted from the California Code of Regulations (CCR) requirements are issued waste discharge requirements (WDRs) and are regulated by the WDR Program. For the proposed project, a RWD will be required either under Resolution R5-2018-0085 or Order R5-2022-0052 by the Central Valley RWQC. In addition, the applicant will have to obtain a 401 Certification from the Central Valley RWQCB for the proposed project. Approval of the 401 Certification will require that any discharges from the proposed project are in compliance with the Clean Water Act. Also refer to Section IX a) which covers dredged material disposal requirements. **Less than Significant Impact**	24, 27
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X		Normally groundwater is affected when there is an alteration of an existing channel, or if there is an increase in the number of impervious surfaces, or if groundwater wells are being drilled. The proposed project only includes maintenance dredging of the harbor. **Less than Significant Impact**	24

c) 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 that would: i) result in substantial erosion or siltation on-site 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?			X		The project is not expected to result in the erosion of channel banks, only the deepening of existing channels to safe and navigable depths. As mentioned before, there will be no increase of impervious surfaces that could result in higher runoff rates or volumes and offsite issues downstream. Dredged material will be loaded into dump trucks using an excavator located on the shore. Much of the water will decant from the dredged material during this initial transfer to the trucks. Dredged material is proposed for disposal and drying at the Eastlake Sanitary Landfill in Clearlake. **Less Than Significant Impact**	27
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X		The proposed project site is located within the 100-year flood plain. Elevation at the site is 1333 feet (Federal Emergency Management Administration, 2005). Dredging would occur in Clear Lake which does experience ebbs and flows, but the waters are inland not located in a tsunami or seiche hazard zone according to the California Tsunami Maps and Data (California Department of Conservation, 2022). The Project does not propose elements that would pose risk of release of pollutants during inundation. Channels would be deepened to safe and navigable depths, which may increase flood capacity and thus reduce the risk of flood hazard. Disposal of dredged materials would comply with the applicable provisions of CWA. **Less Than Significant Impact**	18, 7
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X		Lake County regulates countywide water quality through its municipal code and plans including the Clear Lake Integrated Watershed Management Plan (County of Lake Public Works, 2009) and its Groundwater Management Plan (CDM In Cooperation with the California Department of Water Resources, Northern District, 2006). Both plans include water quality monitoring. Since the project would have to be in compliance with the CWA, it would not obstruct implementation of the County plans which are also in compliance with the CWA. **Less Than Significant Impact**	12, 10
XI. LAND USE AND PLANNING *Would the project:*						
a) Physically divide an established community?			X		Communities are physically divided when roads and bridges, walls, and other barriers are constructed. Although the project site will be closed off	24

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>to the public, access to the Lucerne Harbor Park will still remain open. After construction is complete, the boat ramp will be reopened.

Less than Significant Impact</td><td></td></tr>
<tr><td>b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</td><td></td><td></td><td>X</td><td></td><td>This project will have to be in compliance with the Lake County General Plan and Lake County Municipal Code, as well as State and federal regulations.

Less than Significant Impact</td><td>-</td></tr>
<tr><td colspan="6">XII. MINERAL RESOURCES
Would the project:</td></tr>
<tr><td>a) 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?</td><td></td><td></td><td></td><td>X</td><td>The project site is not identified by the Lake County Aggregate Resource Management Plan as a mineral resource site (Lake County Planning Department Resource Management Division, 1992).

No Impact</td><td>23</td></tr>
<tr><td>b) 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?</td><td></td><td></td><td></td><td>X</td><td>Neither the County of Lake’s General Plan, nor the Lake County Aggregate Resource Management Plan designates the project site as being a locally important mineral resource recovery site (Lake County Planning Department, Resource Management Division, 1992).

No Impact</td><td>23</td></tr>
<tr><td colspan="6">XIII. NOISE
Would the project result in:</td></tr>
<tr><td>a) 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?</td><td></td><td></td><td>X</td><td></td><td>Attachment C includes the Noise Impacts Related to Lake Restoration Activities at Lake Kittamaqundi and Lake Elkhorn (unknown, but thought to be HDR Engineering, Inc., 2007). The noise impacts in this example are similar to what the proposed project would produce so provides a good comparison. The report relies on a Fact Sheet from the U.S. Environmental Protection Agency (USEPA). According to this report:

Generally, hydraulic dredges generate noise at around 60 to 80 decibels (dB) at about 50 feet. Sediment dewatering equipment will be less noisy, operating at around 50 to 60 dB. A backhoe or loader generates about 85 dB, while a generator operates at about 78 dB. The large dump trucks used to transport the sediment will be the primary source of noise, generating around 90 dB each.

The USEPA has identified the following levels of loudness (compared to 70 dB) listed in Table 1.

Table 1: USEPA Levels of Loudness

<table><tr><td>dB</td><td>Levels of Loudness</td></tr><tr><td>< 60</td><td>quiet</td></tr><tr><td>60 – 90</td><td>moderate</td></tr><tr><td>90 – 110</td><td>very loud</td></tr><tr><td>> 110</td><td>uncomfortable</td></tr></table></td><td></td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>The report further states that with distance noise decreases in inverse proportion to the square of the distance from the sound source. Table 2 is a measure of noise sources at different distances from the source.

Table 2: USEPA Distance from Noise Source

<table>
<tr><td></td><td colspan="6">Distance from Noise Source (ft.)</td></tr>
<tr><td></td><td>50</td><td>100</td><td>200</td><td>400</td><td>800</td><td>1600</td></tr>
<tr><td>Hydraulic Dredge</td><td>70 dB moderate</td><td>64 dB moderate</td><td>58 dB moderate</td><td>52 dB moderate</td><td>46 dB moderate</td><td>40dB moderate</td></tr>
<tr><td>Staging Area Activity</td><td>95 dB very loud</td><td>89 dB moderate</td><td>83 dB moderate</td><td>77 dB moderate</td><td>71 dB moderate</td><td>65 dB moderate</td></tr>
</table>

Dredging activities would occur on the water so would be 70 to over 200 feet from the parking lot. As discussed in Section III of this report, construction equipment including diesel dump trucks would have to comply with the State’s 5-minute idling rule.

The Lake County Zoning Ordinance Article 41, Section 41.11 regulates maximum sound emissions for any use. However, under Section (e) Exemptions: Local noise standards set forth in this Section do not apply to the following situations and sources of noise provided standard, reasonable practices are being followed:
5. Construction site sounds between 7:00 am and 7:00 pm.

Less Than Significant Impact</td><td></td></tr>
<tr><td>b) Generation of excessive groundborne vibration or groundborne noise levels?</td><td></td><td></td><td>X</td><td></td><td>Pursuant to Lake County Zoning Ordinance Article 41, Section 41.15, No use shall generate ground vibration which is perceptible without instruments beyond the lot line. Ground vibrations caused by motor vehicles, aircraft, temporary construction work, or agricultural equipment are exempt from these standards.

Less Than Significant Impact</td><td>11</td></tr>
<tr><td colspan="7">XIV. POPULATION AND HOUSING
Would the project:</td></tr>
<tr><td>a) Induce substantial unplanned 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)?</td><td></td><td></td><td>X</td><td></td><td>This project includes maintenance dredging of a harbor. Once construction ends and the boat ramp reopened, use of the harbor would resume at expected historical levels. Lake County residents and tourists use the boat ramp year around. During the summer months local businesses are frequented by tourists.

Less Than Significant Impact</td><td>24</td></tr>
<tr><td>b) Displace substantial numbers of existing people or housing, necessitating the</td><td></td><td></td><td></td><td>X</td><td>See XIV. Section a).

No Impact</td><td>24</td></tr>
</table>

construction of replacement housing elsewhere?						
XV. PUBLIC SERVICES *Would the project:*						
a) 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: - Fire Protection? - Police Protection? - Schools? - Parks? - Other Public Facilities?			X		Northshore Fire provides service to Lucerne and would respond to any service calls. The agencies fire department is located at 6257 7th Avenue (less than 0.1 mile), only 2 blocks from the Lucerne Harbor Park. During construction the site would still be opened to emergency responders. The Lake County Sheriff's Office is located at 6222 State Hwy 20, only 82 feet from the park. This agency would also have access to the park during construction. However, this agency would not be able to access the boat ramp for emergency services on the lake, but would have to use other nearby boat ramps located in Clearlake Oaks, Clearlake, and Lakeport. Due to the short duration of construction activities, impacts are expected to be less than significant. **Less Than Significant Impact**	19
XVI. RECREATION *Would the project:*						
a) 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?			X		Although dredging will improve access to the lake for boats, the historical use of the ramp is not expected to increase. The Lucerne Harbor Park includes both non-boating and boating visitors. Usage of the park is also expected to remain the same as before the boat ramp was closed. The park is well maintained on a regular basis by the Lake County Public Services Department. **Less Than Significant Impact**	24
b) 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?				X	Lucerne has two parks with playgrounds, as well as other small setting/resting areas including the Davis rest stop. According to the U.S, Census Database, the 2020 population for Lucerne is 2,674. The existing parks more that adequately serves the population. See Section XIV a). **No Impact**	19, 24
XVII. TRANSPORTATION *Would the project:*						
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X		According to the Final 2022 Lake County Regional Transportation Plan/Active Transportation Plan, State Highway 20 which the Lucerne Harbor Park is accessed is along the Lake Transit's bus route (Dow & Associates, 2022). The bus stop in Lucerne is located at State Highway 20 and 1st Street (Lake Transit, 2022) which is approximately 0.6 miles from the project site. The 2011 Lake County Regional Transportation Bikeway Plan includes all the Proposed Bikeway Facilities around Lake County. In Lucerne, the Proposed Bikeway Facilities are along all of State Highway 20 and from the Lucerne Elementary School along Country Club Drive, as	15, 25

					well as along 13th Street. Lucerne Harbor Park will remain open to the public. Pursuant to federal and State regulations, construction equipment entering the project site along State Highway 20 must yield to both pedestrian and bicycle traffic. The boat ramp will remain closed during maintenance dredging. There will be no boats entering or leaving the harbor. **Less Than Significant Impact**	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X		The project would result in less boat trips as the ramp would remain closed. During construction there would be a very small increase in vehicle miles traveled (VMT) first from the initial movement of equipment to the site, and then from construction workers traveling to and from the site. Construction workers would commute together when feasible. Due to the short length of the project however, VMT would be minimal. The Project would provide long term benefits to transportation by assuring safe and navigable depths of the harbor therefore allowing for continued water access to and from Lucerne Harbor Park and the community of Lucerne. **Less Than Significant Impact**	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X		As proposed the project only includes maintenance dredging of the harbor. There would be no realignment of the channel. The construction area would be closed off to the public. **Less Than Significant Impact**	24
d) Result in inadequate emergency access?			X		Emergency access for ambulance, fire, and/or sheriff would remain open from State Highway 20. See Section XVII a). **Less than Significant Impact**	15, 24, 25
XVIII. TRIBAL CULTURAL RESOURCES *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*						
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or					See Section V. a) through c). DZC Archaeology & CRM Consulting prepared a cultural report on October 2022. Mitigation measures CUL-1 through CUL-4 shall be incorporated into the project. **Less than Significant with Mitigation Incorporated**	17
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying					See Section XVIII. a). **Less than Significant with Mitigation Incorporated**	17

the criteria set forth in subdivision (c) of Public Resources Code 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.						
XIX. UTILITIES AND SERVICE SYSTEMS *Would the project:*						
a) 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?			X		The project includes maintenance dredging of the harbor. No wastewater treatment facilities are associated with the project. No underground or overhead utility lines will need to be moved or relocated. There is no natural gas at the site. **Less Than Significant Impact**	24
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X	The project would not require a water supply connection or need for water during construction. **No Impact**	24
c) Result in a determination by the wastewater 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?				X	See Section XIX. a). **No Impact**	24
d) 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?			X		It is estimated that 2,500 cubic yards of sediment will be disposed of at the Eastside Landfill in Clearlake. Dump trucks will be used to transport the dredged material to the landfill soil borrow area, which will be used as a drying area for the dredged material. Once the material has dried sufficiently, the dredge material will be used for daily landfill cover and other on-site beneficial reuse purposes in accordance with the landfill permits (SHN, 2021). **Less than Significant Impact**	27
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X		All stages of dredge disposal would comply with required federal, State, and local management regulations, including but not limited to, dredge material acceptance criteria, effluent limits, monitoring and reporting, and applicable mitigation. Impacts are not anticipated. Please also refer to Section IX. a). **Less than Significant Impact**	24, 27

XX. WILDFIRE *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*						
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X		Lucerne Harbor Park is classified on CAL FIRE's FRAP map as being in a high fire severity zone (CAL FIRE, 2022). The project would have to comply with the County of Lake, 2020 Emergency Operations Plan with the Wildland Fire Annex, as well as with the Lake County Local Hazard Mitigation Plan Update (County of Lake, Office of Emergency Services, 2020). Please refer to Section XV. a), and Section IX. g). **Less than Significant Impact**	2, 12
b) 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?			X		Slopes at the project site appear to be less than 1%. There is sometimes wind along the shoreline, but construction activities would primarily be on the water. **Less than Significant Impact**	24
c) 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?			X		The project is not proposing to add or maintain any additional infrastructure beyond what is existing. Construction activities would comply with all local, State, and federal regulations related to wildfires. **Less than Significant Impact**	24
d) 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?			X		There would be no changes to topography such as slope or drainage changes, only maintenance dredging of the existing harbor. No habitable buildings or structures are proposed. All work would be confined to the footprint of the project site and its associated access channel, upland work is not proposed except for placement of dredged material at the Eastside Landfill. **Less than Significant Impact**	24

XXI. MANDATORY FINDINGS OF SIGNIFICANCE						
a) Does the project have the potential to substantially 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?		X			As proposed the project would be scheduled to avoid impacts to the Clear Lake hitch. However, maintenance dredging could eliminate important examples of major periods of California history or prehistory. Mitigation measures have been applied to reduce impacts to less than significant. **Less than Significant with Mitigation Incorporated**	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X			Due to the type of project, and the short duration of construction, impacts after mitigation is applied would not be cumulatively considerable when viewed in connection with other past, current, and probable future projects. The following environmental factors were considered with mitigation measures incorporated: Cultural Resources and Tribal Cultural Resources. **Less than Significant with Mitigation Incorporated**	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X		The proposed project would reduce boating accident hazards associated with the accumulation of sediment. Because the proposed project represents a net decrease in environmental effects that could adversely impact human beings, either directly or indirectly, project impacts to human beings would be less than significant. **Less than Significant Impact**	

REFERENCES

1.	Bay Area Air Quality Management District. 2022. *CEQA Thresholds and Guidelines Update*. Accessed 02 December 2022 at < https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines#:~:text=4.,a%20project's%20lifetime%20GHG%20emissions>.
2.	CAL FIRE. 2022. *FRAP*. Assessed 03 December 2022 at < https://frap.fire.ca.gov/>.
3.	California Air Resources Board. 2022. Criteria Air Pollutants. Accessed 28 November, 2022 at <https://ww2.arb.ca.gov/our-work/programs/criteria-air-pollutants#:~:text=Criteria%20air%20pollutants%20are%20air,5>.
4.	California Department of Conservation. 2018. *California Important Farmland Finder*. Accessed 28, November 2022 at <https://maps.conservation.ca.gov/dlrp/ciff/ >.
5.	___. 2019a. *Alquist-Priolo Site Investigation Reports.* Accessed 23 August 2022 at <https://maps.conservation.ca.gov/cgs/informationwarehouse/apreports/>.
6.	___. 2019b. *Earthquake Zones of Required Investigation*. Accessed 23 August 2022 at <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.
7.	___. 2022. *California Tsunami Maps and Data*. Accessed 02 December 2022 at < https://www.conservation.ca.gov/cgs/tsunami/maps>.
8.	California Department of Fish and Wildlife. 2022. *California Natural Diversity Database (CNDDB)*. Assessed 28 November, 2022.
9.	California Department of Transportation. 2015. Caltrans *Website*. Accessed 04 December 2022 at <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.
10.	CDM In Cooperation with the California Department of Water Resources, Northern District. 2006. *Lake County Watershed Protection District, Lake County Groundwater Management Plan*. March 31, 2006.
11.	Community Development Department. 2019. *County of Lake, California Zoning Ordinance*. Articles amended through May 21, 2019.
12.	County of Lake, Office of Emergency Services. 2020. *Emergency Operations Plan*. July 2020.
13.	County of Lake Public Works, 2010. *Clear Lake Integrated Watershed Management Plan*. February 2010.
14.	Department of Toxic Substances Control. 2022. *EnviroStor*. Accessed 02 December 2022 at <https://www.envirostor.dtsc.ca.gov/public/>.
15.	Dow & Associates. 2011. *2011 Lake County Regional Transportation Bikeway Plan. A Five Year Capital Improvement Program*. Prepared for the Lake County/City Area Planning Council. Adopted: August 10, 2011.
16.	___. 2022. *Final 2022 Lake County Regional Transportation Plan/Active Transportation Plan*. Prepared for the Lake Area Planning Council.

17.	DZC Archaeology & CRM Consulting. 2022. *Phase I Cultural Resource Inventory Report & Construction Monitoring Approach For the Lucerne Harbor Dredging Project Lake County, California. October 2022.*
18.	Federal Emergency Management Administration. 2005. *FEMA Flood Map Service Center: Search by Address*. Search conducted on December 02, 2022.
19.	Google Maps. 2022. *Map of Project Site*. Accessed 29 November 2022 at <https://www.google.com/maps>.
20.	Hodges & Shutt. 1992. *Lake County Airport Land Use Compatibility Plan*. Adopted by Lake County Airport Land Use Commission, November 16, 1992.
21.	Lake County Air Quality Management District. 2022. *Permits and Compliance*. Accessed 28 November, 2022 at <https://gispublic.co.lake.ca.us/portal/apps/webappviewer/index.html?id=87dfc0c535b2478bb67df69d6d319ecahttps://www.lcaqmd.net/home/permits/>.
22.	Lake County Community Development Department. 2009. *The Shoreline Communities Area Plan*. Adopted September 15, 2009.
23.	Lake County Planning Department, Resource Management Division. 1992. *Lake County Aggregate Resource Management Plan, An Element of the Lake County General Plan, Adopted November 19, 1992.*
24.	Lake County Public Services. 2022. *Application Materials*. On file at the Community Development Department, Planning Division.
25.	Lake Transit Authority. 2022. Lake Transit, Route 1 North Shore, Clearlake to Lakeport. Accessed 02 December 2022 at < https://laketransit.org/routes-schedules/regional-and-intercity-routes-schedules/rte1/>.
26.	Natural Resources Conservation Service. 2019. *Web Soil Survey*. Accessed 25 November 2022 at <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
27.	SHN. 2021. *Sediment Characterization Work Plan, Lucerne Harbor Park Boat Ramp Maintenance Dredging, Lake County, California*. July 13, 2021.
28.	State of California, Resources Agency, Department of Conservation. 2016. *Earthquake Shaking Potential for California*, 2016.
29.	United States Geological Survey. 2022. *Areas of Land Subsidence in California*. Accessed on 30 November, 2022 at <https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html>.
30.	Unknown, but thought to be HDR Engineering, Inc. 2007. *Noise Impacts Related to Lake Restoration Activities at Lake Kittamaqundi and Lake Elkhorn*. PDF. Available online at: < https://www.columbiaassociation.org/wp-content/uploads/2016/03/DredgingKittamaqundiNoisep-id=162.pdf>.
31.	U.S. Fish and Wildlife. 2022. National Wetlands Inventory surface waters and wetlands. Accessed on 28 November, 2022 at < https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>.

Lucerne Harbor Dredging Project
Project Mitigation Monitoring and Reporting Program

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Cultural Resources					
CUL-1-CUL-4: The project would possibly impact cultural resources during construction.	**CUL-1**: Archaeological and Tribal Monitors will be present during earth disturbing activities related to the project within the APE.	During Construction	County of Lake/Contractor/Tribal Monitors	County of Lake/Tribal Government	
	CUL-2: Resources in, or adjacent to, the APE will be flagged for identification and avoidance, the extent of which is at the discretion of the on-site archaeologist.	Prior to Construction	County of Lake/Tribal Monitors	County of Lake/Tribal Government	
	CUL-3: Cultural material recovered during earth-disturbing activities shall be retained by the Robinson Rancheria for the duration of the Project.	During Construction	County of Lake/Contractor/ Tribal Monitor	County of Lake/Tribal Government	
	CUL-4: Following the conclusion of Project activities, recovered cultural material shall be re- interred at a local of the Tribes choosing and, in a manner, consistent with their cultural practices.	Following Construction	County of Lake/Tribal Government	County of Lake/Tribal Government	
Tribal Cultural Resources					
CUL-1-CUL-4: The project would possibly impact tribal	**CUL-1**: Archaeological and Tribal Monitors will be present during earth disturbing activities related to the Project within the APE.	During Construction	County of Lake/Contractor/Tribal Monitors	County of Lake/Tribal Government	

cultural resources during construction.	**CUL-2**: Resources in, or adjacent to, the APE will be flagged for identification and avoidance, the extent of which is at the discretion of the on-site archaeologist.	Prior to Construction	County of Lake/Contractor/Tribal Monitors	County of Lake/Tribal Government	
	CUL-3: Cultural material recovered during earth-disturbing activities shall be retained by the Robinson Rancheria for the duration of the Project.	During Construction	County of Lake/Contractor/Tribal Monitors	County of Lake/Tribal Government	
	CUL-4: Following the conclusion of Project activities, recovered cultural material shall be re- interred at a local of the Tribes choosing and, in a manner, consistent with their cultural practices.	Following Construction	County of Lake/Tribal Government	County of Lake/Tribal Government	

Noise Impacts Related to Lake Restoration Activities at Lake Kittamaqundi and Lake Elkhorn

Short-term temporary increases to noise will occur in the vicinity of the dredging operations and staging/dewatering activities. Sources of noise include the dredging equipment, dewatering equipment, generators, loaders, and the trucks used to transport the dewatered material for placement. Noise levels generated by the dredging operation will vary according to the size and type of the equipment used, and more importantly, the size and type of the engines. All equipment used will be required to meet regulatory requirements for mufflers and other sound suppression techniques. However, the lake restoration – like any construction activity – will generate some noise.

Generally, hydraulic dredges generate noise at around 60 to 80 decibels[1] (dB) at about 50 feet. Sediment dewatering equipment will be less noisy, operating at around 50 to 60 dB. A backhoe or loader generates about 85 dB, while a generator operates at about 78 dB. The large dump trucks used to transport the sediment will be the primary source of noise, generating around 90 dB each.

Comparative Noise Levels - The attached U.S. Environmental Protection Agency Fact Sheet on Noise, generated for the dredging of the Hudson River PCBs Superfund Site, provides a useful comparison of noise from dredging and sediment dewatering activities to other routine noise levels. The USEPA has identified the following levels of loudness (compared to 70 dB):

dB	Levels of Loudness
< 60	quiet
60 – 90	moderate
90 – 110	very loud
> 110	uncomfortable

Dredging activities are at the lower end of the moderate noise levels, although the trucks used to haul the sediment away are much louder.

The adverse impact of the noise generated by the project will be largely dependent upon the distance from the source, the time of year, and the time of day (people are more sensitive to noise at night). Change in noise levels compared to ambient noise will also be a key in how people perceive the impacts.

Distance from Source - Noise levels from a point source decrease in inverse proportion to the square of the distance from the sound source – e.g., at distances greater than 50 feet from the source, every doubling of the distance decreases the noise by approximately 6 dB.

[1] Noise levels are measured by decibels (dB), a logarithmic scale measuring sound pressure levels. An increase of 10 dB is equivalent to doubling the noise level, e.g. a 70 dB noise sounds twice as loud as a 60 dB noise. The total sound pressure created by multiple sound sources (such as several trucks) is not mathematically additive; combining several noise sources generally only increases the pressure level a few dB above the loudest sound. For example, two trucks generating 90 dB each have a combined noise level of 93dB.

Outdoor noise levels from the dredging and staging areas are estimated as shown assuming only decreases due to distance:

	Distance from noise source					
	50 ft	100 ft	200 ft	400 ft	800 ft	1,600 ft
Hydraulic Dredge[2]	70 dB moderate	64 dB moderate	58 dB quiet	52 dB quiet	46 dB quiet	40 db quiet
Staging Area Activity[3]	95 dB very loud	89 dB moderate	83 dB moderate	77 dB moderate	71 dB moderate	65 dB moderate

Reference the associated maps for concentric rings that corresponde to the "Distance from Noise Source".

There are also numerous environmental factors that determine the level of sound actually "heard", including surrounding terrain, ambient or background sound level, wind direction, temperature gradient, relative humidity, etc.

Time of Year – Noise has a greater impact in the summer time because of open windows, outside activity, etc. In the winter and when windows are closed for air conditioning in the summer, there is a 15 dB reduction within a building. If the windows are open, there is generally only a 5 dB reduction.

Time of Day – People are more sensitive to noise during the night than during the day.

Ambient Noise - Background, or ambient noise, will also play a role in determining the perceived level of impact. Where ambient noise is relatively high, an increase in noise is often perceived as having less impact. Thus a residential area next to a main roadway would likely be less sensitive to additional truck noise than a residential area in a less noisy environment.

Human Reaction to Changes in Sound Pressure – Generally, increases in sound pressure < 3 dB have no appreciable effect on people. Increases from 3 -5 dB would have an adverse noise impact only where the most sensitive of receptors are present; most people would notice little real change in an increase of 5 dB or less. Increases from 5 – 10 dB could be considered intrusive; increases from 10 – 15 dB are very noticeable, and increases of 15 - 20 dB are objectionable to most people.

---

[2] Hydraulic dredges generate noise between 60 to 80 dB, depending on size of dredge, engine, and other characteristics. 70 dB is used as a reasonable mid-range, representative of the smaller to mid-size dredges likely to be employed on the lakes.

[3] Staging area sound level is estimated as a compilation of multiple sound sources, including dewatering equipment, a loader, generator, and three trucks operating on site.

Noise Mitigation - Controlling the hours of operation – e.g. limiting peak noise generating operations (e.g. loading sediment onto trucks) to daytime - is the best available method to avoid or reduce adverse noise effects from the dredging operation.

Phone: (707) 459-4518 Email: info@shn-engr.com Web: shn-engr.com
335 S. Main Street, Willits, CA 95490-3977

Reference: 421020

July 13, 2021

Stephanie Tadlock
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Subject: Sediment Characterization Work Plan, Lucerne Harbor Park Boat Ramp Maintenance Dredging, Lake County, California

Dear Stephanie Tadlock:

This work plan has been prepared for characterization of sediments at the Lucerne Harbor Park (LHP) boat ramp planned for maintenance dredging. The work plan will use composite sampling prior to dredging to evaluate the chemical quality of the sediment and determine dredged material suitability for final placement. SHN has prepared this work plan on behalf of the County of Lake Public Services Department (PSD).

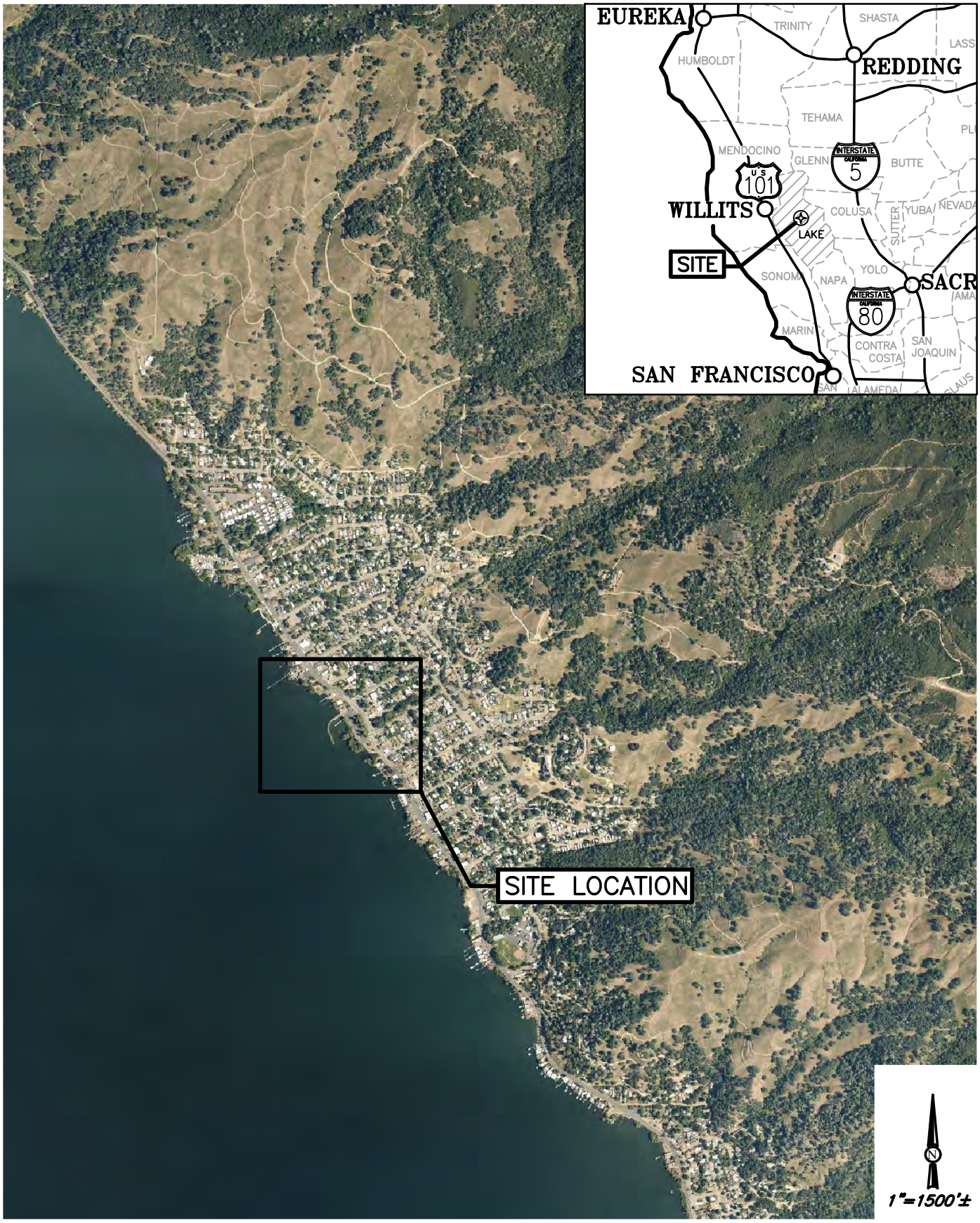
1.0 Project Description

The LHP is located on Highway 20 in the town of Lucerne, Lake County California (Figure 1). The boat ramp is comprised of concrete and mostly enclosed by a perimeter pier landing (Figure 2). The outlined dredge unit (DU) area to be characterized is approximately 0.8 acres and encompasses approximately 2,200 to 2,500 cubic yards (cy) of material to be dredged. Dredging is anticipated to be accomplished using a floating clamshell dredge paired with one to two barges pushed by a shallow water tugboat. Dredge depth will be to approximately the original design depth of 1,316 feet National Geodetic Vertical Datum of 1929 (NGVD 29) with a 6-inch maximum over-dredge allowance.

Material dredged from the harbor will be loaded onto a barge using the clamshell and the loaded barge will be pushed to the boat ramp area by the tugboat. At the boat ramp area, the dredged material will be loaded into dump trucks using an excavator located on the shore. Much of the water will decant from the dredged material during this initial transfer to the trucks.

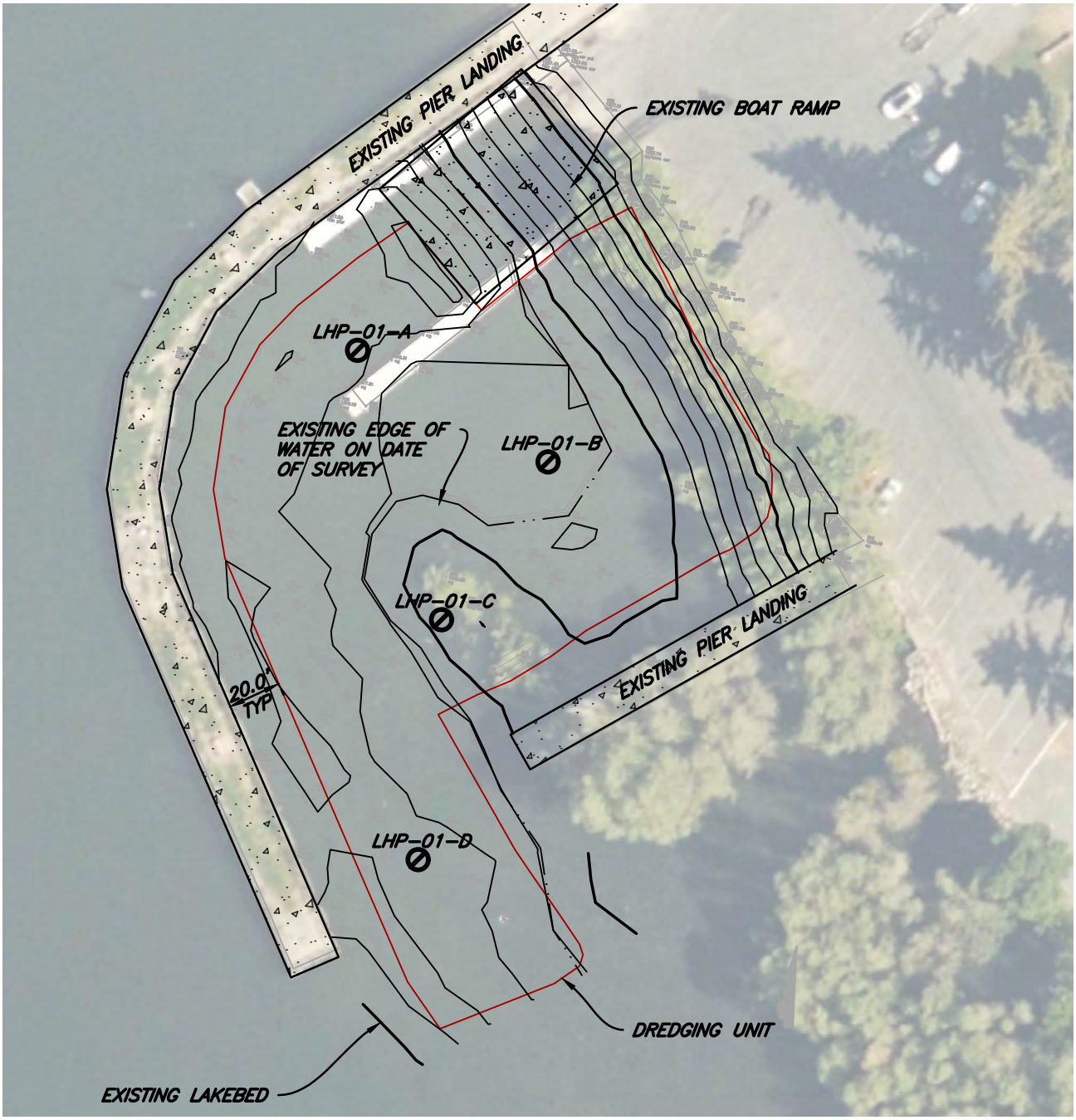
2.0 Sample Rationale

Based on guidelines for implementing the Inland Testing Manual (ITM) in the San Francisco Bay region, the estimated total dredge volume would require one composite sample made up of four sample stations (USACE, 1998). The location of the four sample stations is shown on Figure 2 and details are provided in Table 1, below.



\\willits\Projects\2021\421009-Lucerne-Dredg\Dwgs, SAVED: 7/13/2021 2:47 PM SAKTURAN, PLOTTED: 7/13/2021 2:48 PM, AKTURAN, SUYAR

SHN	County of Lake Parks and Recreation Lucerne Harbor Park Dredging Lucerne, California	Site Location - SHN 421009
	July 2021 | 421009-LUCERNE-Sample	Figure 1



LEGEND:

- SAMPLE LOCATION
- DREDGING UNIT

N

1"=60'±

SHN	County of Lake Parks and Recreation Lucerne Harbor Park Dredging Lucerne, California	Site Plan Sample Locations SHN 421009
	July 2021 | 421009-LUCERNE-Sample	Figure 2

Table 1. Proposed Sampling Boring Station Locations and Details

Station ID	Northing Coordinates	Easting Coordinates	Sediment Elevation (feet, NGVD[a])	Depth plus Over-depth (feet, NGVD)	Estimated Core Length (feet)
LHP-01-A	6335404.34	2159964.60	1,318	1315.5	2.5
LHP-01-B	6335476.06	2159922.60	1,318.5	1315.5	3.0
LHP-01-C	6335436.00	2159863.19	1,319.5	1315.5	4.0
LHP-01-D	6335427.14	2159772.85	1,318	1315.5	2.5

[a] NGVD: National Geodetic vertical datum 1929

The sample station locations were spatially distributed within the project area to adequately represent the material to be dredged. Sample stations were primarily located in the areas of shoaling and no predominant pollutions sources are known to be present. There is no direct discharge of stormwater runoff from the LHP to this area.

3.0 Field Program

The sediment characterization field program will consist of collecting one composite sample comprised of four sediment samples at the LHP DU on Figure 2. The corresponding land-based coordinates for each sample location (Northing/Easting) are presented in Table 1. Field personnel will use a Trimble GPS system to find each station location during the sampling event.

Material will be collected at each sample location from as much as 4 feet beneath the lake sediment surface using a soil auger. Access to the LHP sample stations will be achieved by field personnel wearing mud-walking boots (Mudders) and/or use of a boat when necessary.

Sediment samples will be placed in laboratory-supplied containers and place in an ice-filled cooler. The samples will be transported to the testing laboratory under proper chain-of-custody documentation for analysis. All material will be logged for lithological conditions using the Unified Soils Classification System as described in the ASTM-International (ASTM) D 2488-90.

4.0 Laboratory Analyses

One composite sample from the LHP DU will be submitted for analysis of chemical properties. Chemical soil samples will be composited by the testing laboratory and analyzed for the following constituents:

- total petroleum hydrocarbons as diesel (TPHD) and as motor oil (TPHMO), using EPA Method 8015B with silica gel cleanup;
- polycyclic aromatic hydrocarbons (PAHs) in accordance with EPA Method 8270;

- metals (California Administrative Manual, Code of California Regulations [CCR] Title 22 or Title 17 [CAM-17] in accordance with EPA Method 6010B and 7141, and if necessary, for soluble threshold limit concentration [STLC]) as described in Title 22, CCR 66261.126 Appendix II (CAM WET), analyzed using EPA Method No. 6010B;
- pesticides in accordance with EPA Method 8081B;
- polychlorinated biphenyls (PCBs) in accordance with EPA Method 8082A; and
- total organic carbon (TOC) in accordance with EPA Method 9060.

Sample testing will be conducted by BC Laboratories, Inc. a State of California-certified laboratory located in Bakersfield, California.

5.0 Dredge Material Disposal

We propose drying the dredged material and disposing of it at the Eastlake Sanitary Landfill in Clearlake, California. The dump trucks will be used to transport the dredged material to the landfill soil borrow area, which will be used as a drying area for the dredged material. Once the material has dried sufficiently, the dredge material will be used for daily landfill cover and other on-site beneficial reuse purposes in accordance with the landfill permits.

To meet suitability requirements for material final placement, LHP DU testing results shall be compared to the results for the intended receiving site (Eastlake Sanitary Landfill). If all levels of constituents are below facility requirements, then the dredge material is considered to have achieved suitability requirements set by the Central Valley Regional Water Quality Control Board (RWQCB). Any constituent with levels above the results for the receiving site will need to be evaluated for risks associated with mobility, toxicity, and exposure to determine suitability. This will occur by conducting a water-waste-extraction test (WET) for soluble concentrations and mobility potential.

6.0 Reporting

Following the collection and analysis of dredged material site samples, a suitability assessment report will be prepared for submittal to the RWQCB. The report will include a summary of activities for site sampling; tabulated data from dredge sediment sampling and analysis, including analytes; test methods; reporting limits; measurement units; and results compared to receiving site requirements. The Lake County PSD will provide the RWQCB with sampling results for discussion purposes prior to initiating maintenance dredging operation.

If you have any questions or comments, please call me at 707-441-8855.

Sincerely,

Erik J. Nielsen, PG, CHG
Project Hydrogeologist

EJN:lms

c.: Lars Ewing County of Lake Public Services

References Cited

National Geographic Society/i-cubed. (2013). Topographic Map of Lucerne, California. Accessed at: http://maps.nationalgeographic.com/maps

U.S. Army Corps of Engineers. (1998). "Evaluation of Dredge Material Proposed for Discharge in Waters of the U.S. Inland Testing Manual, USEPA/USACE.' Washington, D.C.:USEPA/USACE.