

Memorandum

**Subject: West Marin Drainage Rehabilitation Project
Initial Study/Mitigated Negative Declaration, SCH No. 2022080435
Consideration of Comments Received during the Public Review Period**

Date: December 14, 2022

To: Betsy Swenerton, Marin County Department of Public Works

From: Brian Piontek, Horizon Water and Environment

INTRODUCTION

This memorandum has been prepared to summarize the comments received by the Marin County Department of Public Works (County) on the Initial Study/Mitigated Negative Declaration (IS/MND) for the West Marin Drainage Rehabilitation Project (Project). An IS/MND is a California Environmental Quality Act (CEQA) compliance document prepared by a Lead Agency, in this case, the County, that provides environmental analysis for public review. The IS/MND analyzed the impacts resulting from the Project and where applicable, identified mitigation measures to minimize the impacts to less-than-significant levels.

This memorandum describes the public review process undertaken for the IS/MND, summarizes the comments received and provides responses to those comments.

CEQA PROCESS

In accordance with Section 15073 of the CEQA Guidelines, the County submitted the IS/MND to the State Clearinghouse for a 30-day public review period starting August 19, 2022. In addition, the County circulated a Notice of Intent (NOI) to adopt the IS/MND to interested agencies and individuals, published it in the local newspaper, and sent it to the Marin County Clerk for posting. According to the State Clearinghouse CEQANet database, the public review period ended on September 19, 2022.

In accordance with CEQA Guidelines Section 15074(b), the County must consider the IS/MND together with comments received during the public review process prior to adopting the IS/MND. The CEQA Guidelines do not require the preparation of a response to comments for mitigated negative declarations; however, this memorandum has been prepared to acknowledge the comments received but also to document that the comments did not affect the IS/MND's conclusions that the Project would not have any significant effects on the environment.

At the time of approval of the IS/MND, the County will also adopt a Mitigation Monitoring and Reporting Program (MMRP) for those mitigation measures identified in the IS/MND. The MMRP was included in the IS/MND as Appendix G and is included with this memorandum as **Attachment A**. Within five days following IS/MND approval, the County must file a Notice of Determination (NOD) with the State Clearinghouse. A resolution approving the IS/MND and adopting the MMRP and NOD will be prepared for the County's use in this process. This resolution will identify that the County DPW Director has

received and reviewed the IS/MND pursuant to the provisions of the CEQA and makes the following findings:

1. Prior to taking action on the IS/MND and MMRP for the Project, the County read and considered the IS/MND.
2. The IS/MND and MMRP are based on independent judgment exercised by the County.
3. The IS/MND and MMRP was prepared and considered in accordance with the requirements of the CEQA.
4. Considering the record as a whole, there is no substantial evidence that the Project will have a significant effect on the environment.
5. The County Department of Public Works is the custodian of the records of the proceedings on which this decision is based. Records are located at the County offices located at 3501 Civic Center Drive, Room 304, San Rafael, California 94903.

The resolution will identify that based on the above findings, the County DPW Director approves the IS/MND, adopts the MMRP, and directs staff to file the NOD.

The Project's MMRP is included with memorandum as Attachment A.

COMMENTS RECEIVED ON THE IS/MND

During the public review period, the County received three (3) comment letters, as listed below:

1. Llisel Ayon, the California Department of Transportation (Caltrans), dated August 22, 2022;
2. Erin Chappell, the California Department of Fish and Wildlife (CDFW), dated September 13, 2022; and
3. Gordon Bennett, private citizen, dated July 9, 2022. In addition, the County has elected to respond to other comments received from Mr. Bennett outside of the formal CEQA-required public comment period in this memorandum.

These letters are included with this memorandum as **Attachment B**.

CONSIDERATION OF COMMENTS

The section below describes the comments received and how the County will consider and address these comments.

A. Caltrans Comments

Comments from the Caltrans letter dated August 22, 2022 are described below with responses:

Comment A-1: The document should analyze potential impacts to the State Right-of-Way (ROW) from project-related temporary access points and identify temporary access points and mitigation for significant impacts due to construction and noise. The comment states that a transportation permit is necessary any work that requires movement of oversized or excessive load vehicles on State roadways and a Transportation Management Plan is required prior to construction.

Response to Comment A-1: Comment noted. All Project activities would occur outside of the Caltrans ROW; therefore, a Transportation Management Plan and Transportation Permit from Caltrans is not required. As described in Section 3.17, Transportation of the IS/MND, the inclusion of Project avoidance and minimization measures (AMMs) described in Chapter 2, Table 2-4 of the IS/MND would ensure that short-term, construction-related impacts would remain less than significant.

B. CDFW Comments

Comments from the CDFW letter dated September 13, 2022 are described below with responses:

Comment B-1: This comment discusses the potential impact on Coho Salmon and that the threshold for a California Endangered Species Act (CESA) Incidental Take Permit (ITP) is not clearly identified.

Response to Comment B-1: Section 3.4(a), Biological Resources of the IS/MND discusses the Project's potential impacts to Coho Salmon and Steelhead trout. The IS/MND determined that impacts to fish could occur from dewatering, Project-related erosion or sedimentation, change in bed substrate, or accidental leaks or spills of hazardous materials. However, AMM GEN-15, Dewatering Measures, would restrict instream activities from June 15 through October 15, to avoid peak migration periods for salmonids, and AMM BIO-1, Relocation of Aquatic Species for Dewatering, would require diversion of streamflow around the work area when work in flowing streams is unavoidable, screening of pump intakes, and capture and relocation of fish and other aquatic vertebrates to avoid injury and mortality and minimize disturbance. Inclusion of these Project AMMs would ensure that impacts would be less than significant.

The County prepared a Biological Assessment for the Project that analyzes potential impacts to federal listed species, including Coho salmon. The County anticipates formal consultation between the U.S. Army Corps of Engineers (USACE) and the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to evaluate the Project's potential impacts on federally listed species. NMFS has indicated they will be issuing a Biological Opinion (BO) that includes conservation recommendations to minimize any take of listed fish species and further the recovery of Coho salmon.

The County will engage in discussions with CDFW to determine the appropriate permitting approach to authorize take of Coho salmon related to site dewatering and species relocation activities during the permitting process.

Comment B-2: The letter states that the AMMs proposed do not include a requirement to clean construction equipment between sites to prevent the spread of invasive species.

Response to Comment B-2: In response to concerns regarding the potential spread of invasive species, AMM BIO-2 requires biologists involved with the surveying/handling of special-status amphibian and reptile species to employ sterilization techniques appropriate to avoid the transmission of chytrid fungus to or from the site. In addition, AMM BIO-1 was revised to address the potential movement of invasive species (such as New Zealand Mudsnail) between construction sites via unwashed construction equipment and construction workers. The revised AMM would reduce the potential for the Project to introduce invasive species and further reduce potential Project impacts on sensitive biological resources and habitats to a less than significant level.

Comment B-3: This comment identifies concerns regarding AMM BIO-2 and California red-legged frog (CRLF), Foothill yellow-legged frog (FYLF), and western pond turtle (WPT). The comment states that survey requirements in AMM BIO-2 could be interpreted as applying to the entire Project (i.e., a pre-construction survey covering all thirty-five work sites would be conducted at least seven calendar days prior to the start of construction at the first work site). The comment suggests that surveys should be conducted 48 hours prior to ground-disturbing activities at each site.

Response to Comment B-2: As part of the preparation of the IS/MND, the County assessed habitat suitability for sensitive species, including CRLF, FYLF, WPT, and other special-status plant and wildlife species, at each maintenance site; the results of the surveys are discussed in Section 3.4, Biological Resources of the IS/MND. Many maintenance sites are located on ephemeral channels that convey overland flow and stormwater directly following a storm event. These sites lack the hydrology and habitat elements needed to support special-status amphibians. Of the 35 maintenance sites, nine (9) sites support suitable aquatic habitat for special-status amphibians (e.g., CRLF, FYLF, and California giant salamander) and one (1) for WPT.

The County understands that additional pre-construction surveys for special-status species where suitable habitat is present will be required by CDFW Lake and Streambed Alteration Agreement (LSAA) conditions. The County also understands that additional LSAA conditions may be required to avoid and minimize potential impacts to special status species. The County will coordinate survey requirements, locations, and timing with CDFW as part of the LSAA process. Additional LSAA conditions will further reduce potential impacts to special status species to a less than significant level.

Comment B-4: This comment identifies potential concerns regarding the temporal loss of riparian habitat and maintenance and monitoring of restored sites, the potential presence of invasive species, and the lack of clarity of replacement ratios of removed trees, which effects the significance determination. The comment raises concerns that the LSAA requirement is not included as a mitigation measure.

Response to Comment B-4: Potential impacts to riparian habitat is discussed in Section 3.4, Biological Resources of the IS/MND. The majority sites are predominately within road shoulders and open channel areas and do not support wetlands or riparian habitat. In addition, most of the culverts and roadway slip-outs are eroding, generally void of vegetation, and contributing sediment into the associated drainages. Without the Project, the risk of complete culvert failure, increasingly severe slope erosion, road undermining, and more adverse effects to water quality would significantly increase. The Project would improve the existing condition of these sites and is thus, self-mitigating, except for locations where trees will be removed and riprap added.

The County conducted a tree survey and adapted each site design to avoid existing trees to the extent feasible. Current designs indicate that the Project may remove up to fifteen (15) trees in order to perform the necessary maintenance activities. The Project would compensate for removing trees by planting live willow stakes and container plantings consisting of a mix of alders, big-leaf maple, and other native species. The most recent design approximates that 215 live willow stakes and 40 container plantings will be installed as part of the Project. This number of plantings would achieve a tree replacement ratio of approximately 17:1, providing more than adequate restoration for any potential riparian disturbance and beyond what may be required by LSAA conditions.

The IS/MND states that the Project would be required to obtain permits from CDFW and the Regional Water Quality Control Board (RWQCB). In order to obtain these permits, the County would coordinate with each agency in order to determine the Project-specific mitigation ratio as appropriate for the Project and its potential impacts.

Comment B-4: This comment states that the AMMs may not be enforceable mitigation and recommends that the AMMs are instead incorporated as mitigation measures in order to ensure that all potential impacts are reduce to less than significant.

Response to Comment B-4: The AMMs are built into the Project and describe the standard methods the County and/or its contractors are required to implement prior to, during, and following maintenance activities that constitute the Project. Where AMMs could not effectively lower the potential environmental impact to a less-than-significant level, additional mitigation measures were included to ensure resources were adequately protected. Analysis of potential impacts to resources evaluated under CEQA include implementation of the Project AMMs and mitigation measures in order to avoid and/or reduce potential impacts to a less than significant level. The Project AMMs would be implemented the same as construction specifications described in the Project's engineering plans, additional CEQA mitigation measures, and federal, state, and local permit conditions and requirements. The County acknowledges that additional compensatory mitigation may be required by federal and state regulatory agencies as part of the permitting process.

The Project's MMRP is included as Attachment A and provides a complete list of Project AMMs and mitigation measures, the responsible party to complete each measure, and the applicable schedule for each measure.

C. Gordon Bennett Comments

Comments from Gordon Bennett's letter dated July 9, 2022 are described below with responses C-1 to C-5. In addition, comments received from Mr. Bennett outside of the formal public comment period regarding the Point Reyes-Petaluma Road Mile Post 12.33 site are included below in responses C-6 to C-13.

Comment C-1: This comment questions if the determination of salmon-streams included only streams that currently host salmon or also included streams that historically hosted salmon.

Response to Comment C-1: As discussed in Section 3.4, Biological Resources of the IS/MND, the only site that has the potential to contain (currently or historically) salmonids is the Point Reyes-Petaluma Road Mile Post 12.33 site on Black Mountain Creek. Extensive literature and database searches were conducted to determine current and historical fish presence and use of Black Mountain Creek; no formal records were found. However, during reconnaissance surveys of the Project site from 2019-2021, steelhead of varying life stages were observed in the culvert inlet and outlet scour pools. Furthermore, in December 2021, a spawning Coho was observed in the downstream scour pool. In an effort to conduct a thorough environmental analysis, aquatic habitat was assessed in April 2022 from the Black Mountain Creek confluence with Lagunitas Creek, upstream through the road culvert site and Black Mountain Ranch property, to where the creek slope steepened beyond 12% gradient (approximate) and lacked an adequate hydroperiod and suitable flows to support fish. The assessment determined suitable salmon habitat was restricted to three small pools, including the culvert inlet and outlet scour pools and

a third pool downstream of the culvert location. The creek provides no perennial habitat for fish beyond the three pools near the culvert site.

The other sites along Point Reyes-Petaluma Road are seasonal streams and ephemeral drainages that cannot support salmon due to insufficient hydrological surface connectivity, channel structure and steep slope, barriers to fish movement, and available persistent aquatic habitat and refuge.

Seeger Dam (Nicasio Reservoir) was constructed in 1961 and is a barrier to fish migration. The Nicasio Road and Lucas Valley Road sites are located upstream of Seeger Dam and are thus not accessible to anadromous or special-status fish species.

Comment C-2: This comment questions the decision to model for the use of a 10-year-storm criteria and whether climate change that could result in increased storm intensity and frequency was considered.

Response to Comment C-2: Steady state hydraulic analysis was performed for the applicable design flow where conveyance capacity, riprap sizing, and scour calculations were necessary for design. Conveyance capacity modeling of culvert pipes and channels was primarily performed using the Federal Highway Administration's (FHWA) HY-8 modeling software. Channel hydraulics of interest were based on normal depth calculations. HEC-RAS was used for more complex design configurations where detailed hydraulic analysis was necessary. The design storm and design water level for scour control, riprap sizing, and culvert replacement of greater than or equal to 18 inches in diameter are based on Caltrans Highway Design Manual Table 831.3. Since the County roadways are rural and have a posted speed limit of less than 45 miles per hour, the design storm and design water level are:

- A 10-year 24-hour peak flowrate (Q_{10}) without causing the headwaters to rise above the edge of roadway pavement.

The design storm and design water level for the RWQCB's Culvert Capacity Upgrades are based on Caltrans Highway Design Manual Section 821.3 criteria. Five (5) culverts along Nicasio Valley Road and Point Reyes Petaluma Road met the RWQCB Culvert Capacity criteria for capacity upgrades. The two primary design storm and design water for the Point Reyes Petaluma Road Mile Post 12.33 culvert repair site are:

- A 10-year 24-hour peak flowrate (Q_{10}) without causing the headwater elevation to rise above the inlet top of the culvert and,
- 100-year 24-hour peak flowrate (Q_{100}) with-out causing the headwaters to rise above the edge of roadway pavement.

The flood history and observed conveyance conditions during recent storm events at each culvert location was considered in the culvert capacity analysis. In addition, storm intensity and frequency were qualitatively considered during the prioritization process where existing culverts had historically flooded or hydraulic analysis indicated inadequate conveyance capacity.

Based on the above inputs, the Q_{10} model results proved adequate in evaluating culvert conveyance capacity to meet the Project's goals and objectives.

Comment C-3: This comment questions if culvert lengths were extended to prevent future roadside scouring.

Response to Comment C-3: Erosion control and scour protection are built into all designs. Each maintenance site is specifically designed to address the deficiencies at that location, including installing extensions on culvert outfalls, where appropriate and effective. Pipe extension was applied where excess scour had occurred on the embankment slope and the pipe could readily be extended beyond the embankment toe. Reducing sedimentation is one of the primary goals of the Project, and the County is working with Rob Carson and the Marin Countywide Stormwater Pollution Prevention Program (MCSTOPPP) to comply with the County's targets for meeting the RWQCB's sediment total maximum daily load (TMDL) for Lagunitas Creek.

Comment C-4: This comment questions why debris racks were not proposed.

Response to Comment C-4: Debris racks were considered during Project design where appropriate and within the road ROW. However, existing culverts at most maintenance locations are too small for a debris rack to be effective. In addition, operation and maintenance of debris racks requires routine removal of natural materials from the drainage, occasionally during storm events. While debris racks are more common in East Marin urban areas, the rural setting of the Project sites prohibit the County's ability to efficiently maintain debris racks to retain their effectiveness.

Comment C-5: This comment identifies Point Reyes-Petaluma Road mile post 12.33 as a site of specific concern regarding retrofitting, decreased hydraulic capacity, construction time, potential full road closure, water rights, and the potential of culvert failure.

Response to Comment C-5: The Point Reyes-Petaluma Road mile post 12.33 site has not been identified as a location that has flooded in the past. The comment states that there is a rule-of-thumb for adequate culvert size. The County roads maintenance department has specific knowledge based on decades of experience of what culverts along this specific road section over-top during high storm events and flood the road; Point Reyes-Petaluma Road mile post 12.33 is not one of those sites.

The comment expresses a concern regarding the potential for a decreased hydraulic capacity to increase pressure at the upstream end of the already-undersized culvert. However, investigation during the initial planning stages for the Project, including hydrology and hydraulic analysis, confirmed the proposed action at this site would provide more than adequate conveyance capacity. In addition, the Project would not increase flow through culvert or erode downstream or upstream. Therefore, the Project would not increase the potential for a culvert failure that could impact salmonid habitat or inconvenience the public via roadway reroutes.

The Project will repair and line the interior of the existing culvert and stabilize the culvert invert and outfall and will not require full road closures or significant distance to the roadway itself. The proposed approach is much less invasive and disruptive than the construction methods and lane/road closure that would be required to replace the culvert or to complete another larger capital improvement project.

Concerns regarding water rights are noted. The existing polyvinyl chloride (PVC) pipes within the culvert convey water sourced from a hillside spring downstream and do not divert surface water. Therefore, there would be no potential effect on potential water rights and downstream water users.

Comment C-6: The comment states that the Lag Technical Advisory Committee (TAC) needs to receive presentations at least a week before meetings in order to provide informative advice to creek-impacting projects.

Response to Comment C-6: The County presented concept plans to regulatory agency staff (CDFW, RWQCB, USACE, NMFS) on December 3, 2021 and the TAC members on June 10, 2022. In addition, the County has held several meetings with representatives from CDFW, RWQCB, USACE, and NMFS to discuss Project details and incorporate agency feedback into revised Project designs. The County also hired Horizon Water and Environment as their environmental consultants who are experts at developing designs that avoid/minimize impacts to creeks, salmonids, other special-status species, and sensitive habitats. Horizon has extensive experience working with the regulatory agencies on stream restoration projects to protect and restore salmonid habitat.

Comment C-7: This comment states that diversions from the spring would require a water permit and that diversions from the spring and the creek are the same due to proximity. Additionally, the comment states that routing pipes through a culvert on a public ROW requires an easement.

Response to Comment C-7: The spring identified in Comment C-7 is located up on private property at the base of a hill, and out of the groundwater flow of the stream. The property owner is moving water from their hilltop spring through the culvert in flexible and removable irrigation lines to a lower agricultural field. The County would not require an easement for a temporary, removable irrigation line such as this, especially as it is the only alternative for accessing the opposite side of the road without pumping water up and over the road. The irrigation line is for the Indigo Project, which is a Non-governmental organization (NGO) focused on growing indigo for natural dye production. The property owner is working with the Salmon Protection and Watershed Network to restore a long reach of their property along Lagunitas Creek, which is on the opposite side of the road. The property owner also worked previously with the County to upgrade two culverts on their property for erosion control and sediment reduction to benefit fish downstream; the property owner is aware of impacts to creeks.

Comment C-8: This comment identifies concerns regarding the use of a 10-year storm culvert size calculation, how the 10-year calculation was made. In addition, the comment expresses concern regarding the effect of climate change on the severity and frequency of storms and questions the source of data. Finally, the comment questions the decision to decrease the capacity of the undersized culvert in order to not inconvenience road users. The comment suggests digging out half the culvert at a time to allow road passage over the other half.

Response to Comment C-8: Please refer to Response to Comment C-2 regarding the 10-year storm culvert size calculation. The County conducted modeling that confirmed the culverts are sufficiently sized. Where existing culverts are to be replaced, a two-step replacement process will occur as the comment suggests, where half of the pipe is replaced at a time in order to retain one lane for traffic.

Comment C-9: This comment questions if the gravel bottom at the Point-Reyes Petaluma mile post 12.33 site improves refugia for fish or inhibits refugia due to undersizing the culvert. In addition, the comment questions if the gravel helps the passage of adults or juveniles and if there is any data regarding fish use of the culvert.

Response to Comment C-9: As noted in Response to Comment C-5, the culvert at Point-Reyes Petaluma mile post 12.33 is not undersized. Water depth through the culvert allows for fish passage but does not provide refuge for fish under any flow conditions, either under existing conditions or following Project implementation. However, the roughened culvert bottom increases roughness coefficient (“Manning’s n”) which decreases velocity of flow through the pipe making it easier for fish of varying size and life stages to pass through the culvert. NMFS has reviewed the Project design for the Point Reyes-Petaluma mile post 12.33 site where a roughened bottom is proposed and agrees with the County’s assessment that the design will improve fish passage through the culvert.

Comment C-10: The comment states that the culvert at Point-Reyes Petaluma mile post 12.33 should be modestly upsized as the costs would be the same.

Response to Comment C-10: Please refer to Response to Comment C-5 regarding culvert sizing. Upsizing the culvert would result in a significant increase in cost.

Comment C-11: The comment states that the voids from the new culvert at Point-Reyes Petaluma mile post 12.33 could be visually located and the soil should be compacted and sloped to maximize fish passage.

Response to Comment C-11: Voids around the culvert are detected using ground penetrating equipment that is more accurate at detecting subsurface cavities than visual methods. Voids are then filled using a grout slurry that hardens in place. Once voids have been properly backfilled, pipe lining of the culvert interior commences.

The existing culvert is not a barrier to fish movement. Project elements such as the roughened culvert bottom and installation of a beveled edge on the outfall will further increase the accessibility and mobility of fish through the culvert.

Comment C-12: This comment identifies that the County will need environmental permits from regulatory agencies. This comment states that the culvert pipes end in the creek and that a permit is required to withdraw water from a creek or spring.

Response to Comment C-12: Please refer to Response to Comment 5 regarding the movement of water. The County is aware that the Project will need environmental permits and authorization from USACE, USFWS, NMFS, CDFW, and RWQCB.

Comment C-13: This comment questions the historic analysis of fish locations and the lack of debris racks.

Response to Comment C-13: Please refer to Response to Comment C-1 regarding historic presence of fish and Response to Comment C-4 regarding debris racks.

CONCLUSIONS

The comments received do not affect the IS/MND's conclusions. The Project would not have any significant effects on the environment. With the clarifications provided above, no changes to, or recirculation of, the IS/MND are necessary.

Attachment A

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

This mitigation monitoring and reporting program (MMRP) identifies the mitigation measures identified in Marin County Department of Public Works's (County's or DPW's) West Marin Drainage Rehabilitation Project (Project) Initial Study/Mitigated Negative Declaration (IS/MND). For each mitigation measure, **Table 1** identifies monitoring and reporting actions that will be carried out and the applicable schedule for monitoring activities. Table 1 also includes a column where responsible parties can check off monitoring and reporting actions as they are completed.

In addition, the Project included Avoidance and Minimization Measures (AMMs) integrated into the Project activities. These are included in **Table 2**, which identifies the responsible party and timing of the AMM. It should be noted that AMMs are not mitigation measures and are included here for ease of reference.

As Lead Agency, the County will be responsible for ensuring that mitigation measures identified in this IS/MND are fully implemented. Some mitigation measures will be implemented by the contractor(s) on behalf of the County. Contract documents for the proposed program will identify the obligations of the contractor, including relevant mitigation measures. The County will require that the contractor(s) provide them with documentation that the contractor has adequately implemented all contractual obligations, including applicable mitigation measures. Thus, although the County may be responsible for implementing a mitigation measure (i.e., where the measure states "County will"), this is intended to be inclusive of the contractor's role in implementing certain mitigation measures during maintenance or as part of design.

Acronyms and Abbreviations

AMM	avoidance and minimization measure
BAAQMD	Bay Area Air Quality Management District
BMP	Best management practice
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFG	California Department of Fish and Game (now California Department of Fish and Wildlife)
CDFW	California Department of Fish and Wildlife
CRHR	California Register of Historical Resources
dBA	decibels (A-weighted)
F&G	California Fish and Game
FESA	Federal Endangered Species Act
HMMP	Habitat Mitigation and Management Plan
NAHC	Native American Heritage Commission
NO _x	nitrous oxides
NPDES	Non-point Source Discharge Elimination System
MBTA	Migratory Bird Treaty Act
MLD	most likely descendent
PBO	Programmatic Biological Opinion

USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
SWRCB	State Water Resources Control Board
SR	State Route
TCR	tribal cultural resource
Vdb	vibration velocity in decibels

Table 1. Mitigation Measures and Implementation Requirements

Mitigation Measure	Monitoring and Reporting Action	Implementation Schedule	Completion Date and Initials
<i>Aesthetics</i>			
None required.			
<i>Agriculture and Forestry Resources</i>			
None Required.			
<i>Air Quality</i>			
None Required.			
<i>Biological Resources</i>			
<p>BIO-1: Avoid and Minimize Impacts to Special-Status Plant Species</p> <p>A. A qualified botanist will conduct surveys of Project sites identified as suitable habitat for special status plant species prior to commencement of work.</p> <p>B. Surveys will be conducted during the appropriate time of the year to adequately identify plants.</p> <p>C. The qualified botanist will ensure avoidance and minimize impacts by implementing one or more of the following, as appropriate, per the botanist’s recommendation:</p> <p>D. Flag or otherwise delineate in the field the special status plant populations and/or sensitive natural community to be protected;</p> <p>E. Allow adequate buffers around plants; the location of the buffer zone will be marked in the field with stakes and/or flagging in such a way that exclusion zones are visible to project personnel without excessive disturbance of the sensitive habitat or population itself (e.g., from installation of fencing).</p> <p>F. Time construction or other activities during dormant and/or non-critical life cycle period.</p> <p>G. If special-status plant species are present and the Proposed Project cannot avoid impacts to the species, then a qualified</p>	<ol style="list-style-type: none"> 1. Incorporate construction-related AMMs in the contract documents. 2. Qualified biologist(s) to conduct pre-construction surveys. 3. Retain a qualified biologist(s) to conduct biological monitoring during construction. 4. Send resumes of biological monitor(s) to USFWS at least 15 days before ground disturbing activities. 5. Qualified biologist(s) will establish exclusion zones in accordance. 6. Qualified biologist(s) will monitor work activities in accordance and ensure corrective action as necessary. 	<ol style="list-style-type: none"> 1. Prior to construction 2. Prior to construction 3. Prior to construction 4. 15 days prior to ground disturbing activities. 5. Prior to construction 6. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Implementation Schedule	Completion Date and Initials
botanist will determine the ecologically appropriate minimization measures for the species. Minimization measures may include transplanting, seed collection, or both, depending on the physiology of the species. H. The County will not conduct Proposed Project activities that would result in the reduction of a plant species range or compromise the viability of a local population.			
<i>Cultural Resources</i>			
None required			
<i>Energy</i>			
None required			
<i>Geology, Soils, and Seismicity</i>			
None required			
<i>Greenhouse Gas Emissions</i>			
None required			
<i>Hazards and Hazardous Materials</i>			
None required			
<i>Hydrology and Water Quality</i>			
None required			
<i>Land Use and Planning</i>			
None required			
<i>Mineral Resources</i>			
None required			
<i>Noise</i>			
None required			
<i>Population and Housing</i>			

Mitigation Measure	Monitoring and Reporting Action	Implementation Schedule	Completion Date and Initials
None required			
Public Services and Utilities			
None required			
Recreation			
None required			
Transportation and Traffic			
None required			
Tribal Cultural Resources			
None required			
Wildfire			
None required			
Mandatory Findings of Significance			
Mitigation Measure BIO-1, as described above			

Table 2. Project Avoidance and Minimization Measures

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
General			
<p>GEN-1 Work Windows</p> <ul style="list-style-type: none"> • Ground-disturbing activities in the channel shall occur during the dry season (June 1 through October 31 or as allowed by permits). • The construction work window may be extended provided that there is no measurable precipitation forecasted in the National Weather Service 72-hour forecast and consistent with the terms of regulatory permits and approvals. • No work shall be conducted during or within 24 hours of a rain event (0.5 inches in a 24-hour period). 	County DPW or Contractor	During construction	
<p>GEN-2 Minimize the Area of Disturbance</p> <ul style="list-style-type: none"> • Ground disturbance within the channel shall be kept to the minimum footprint necessary to complete project construction. 	County DPW or Contractor	During construction	
<p>GEN-3 Erosion and Sediment Control</p> <ul style="list-style-type: none"> • Erosion control measures shall be installed according to the requirements and standards in the County’s Erosion and Sediment Control Plan and California Stormwater Quality Association (CASQA) Construction BMP Handbook Fact Sheets and manufacturer’s specifications. Appropriate erosion control measures include, but are not limited to, the following: silt fences, straw bale barriers, erosion control blankets and mats, and soil stabilization measures (e.g., tackified straw with seed, jute blankets, broadcast and hydroseeding). • At no time shall silt laden runoff be allowed to leave the project site within a waterway. Silt control structures shall be monitored for effectiveness and shall be repaired or replaced as needed. • Erosion control fabrics shall consist of natural fibers that will biodegrade over time and are wildlife friendly. No plastic or other non-porous material shall be used as part of a permanent erosion 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>control approach. Plastic sheeting may be used to temporarily protect a slope from runoff.</p> <ul style="list-style-type: none"> All temporary construction-related erosion control methods (e.g., silt fences) shall be removed at the completion of construction. All soils disturbed or exposed during construction activities shall be seeded and stabilized using erosion control measures, such as erosion control fabric or hydromulch. Areas below the Ordinary High Water Mark are exempt from this AMM. 			
<p>GEN-4 Fill, Spoils, and Stockpiled Materials</p> <ul style="list-style-type: none"> Temporary fill materials, excavated spoils that have not yet been hauled off site, and stockpiled material not moved within 14 days shall be isolated with silt fence, filter fabric, and/or straw bales/fiber rolls. The Contractor shall designate areas suitable for material storage near construction entrances and at least 10-feet away from drainage courses and creeks. During wet weather or when rain is forecast within 72 hours, the Contractor shall cover materials that can contaminate rainwater or be transported by runoff to surface waters with a tarp or other waterproof material secured in a manner that would prevent any of the materials from contacting the rainwater 	County DPW or Contractor	During construction	
<p>GEN-5 On-site Hazardous Materials Management</p> <ul style="list-style-type: none"> An inventory of all hazardous materials used (and/or expected to be used) at the worksite and the end products that are produced (and/or expected to be produced) after their use shall be maintained by the worksite manager. As appropriate, containers shall be properly labeled with a “Hazardous Waste” label and hazardous waste shall be properly recycled or disposed of off-site. Exposure of chemicals to precipitation shall be minimized by storing chemicals in watertight containers or in a storage shed (completely 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>enclosed), with appropriate secondary containment to prevent any spillage or leakage.</p> <ul style="list-style-type: none"> • Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials shall not contact soil and shall not be allowed to enter surface waters. • All toxic materials, including waste disposal containers, shall be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. • The storage and disposal of all hazardous materials, such as pesticides, paints, thinners, solvents, and fuels; and all hazardous wastes, such as waste oil and antifreeze; shall comply with all federal, state, and local standards and requirements. • When rain is in the forecast within 72 hours or during wet weather, the Contractor may not apply chemicals in the outside areas. • If hazardous materials are encountered at the project site, the Contractor shall remove and dispose of them according to the Spill Prevention and Response Plan (see GEN-6). 			
<p>GEN-6 Spill Prevention and Response Plan</p> <p>To minimize the potential adverse effects due to the release of chemicals, fuels, lubricants, and non-storm drainage water into waterways, the County or the Contractor shall develop a Spill Prevention and Response Plan to be implemented by the Contractor and all field personnel. The plan shall contain guidelines for cleanup and disposal of spilled and leaked materials at the project site. The plan shall include, but not be limited to, the following measures:</p> <ul style="list-style-type: none"> ▪ Contractor’s designated field personnel shall be appropriately trained in spill prevention, hazardous material control, and cleanup of accidental spills. 	<p>County DPW or Contractor</p>	<p>During construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> ▪ Equipment and materials for cleanup of spills shall be available on site, and spills and leaks shall be cleaned up immediately and disposed of according to the following guidelines: <ul style="list-style-type: none"> – For small spills on impervious surfaces, absorbent materials shall be used to remove the spill, rather than hosing it down with water. – For small spills on pervious surfaces such as soil, the spill shall be excavated and properly disposed of rather than being buried. ▪ Absorbent materials shall be collected and disposed of properly and promptly. ▪ If the waste is hazardous, the Contractor shall comply with all federal, state, and local hazardous waste requirements. ▪ Spill response kits and a stockpile of spill cleanup materials such as rags or absorbents shall be on hand at all times while hazardous materials are in use (e.g., at crew trucks and other logical locations). All field personnel shall be advised of these locations. <ul style="list-style-type: none"> • The Contractor shall routinely inspect the work site to verify that spill prevention and response measures are properly implemented and maintained. 			
<p>GEN-7 Vehicle and Equipment Maintenance/ Cleaning</p> <ul style="list-style-type: none"> • Servicing of vehicles shall be conducted in designated staging areas or maintenance roads outside the top-of-bank to avoid contamination through accidental drips and spills. The Contractor shall use secondary containment such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispenses, changed, or poured. • Incoming equipment shall be checked for leaking oil and fluids. No equipment servicing shall take place in a water body. If emergency repairs are required, only those repairs necessary to move equipment to a more secure location shall be permissible. Drip pans • All vehicles and equipment shall be kept clean. Excessive build-up of oil and grease shall not be permitted. • Vehicle and equipment washing can occur on site only as needed to prevent the spread of sediment, pathogens, or exotic/invasive 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>species. No runoff from vehicle or equipment washing shall be allowed to enter water bodies without being subjected to adequate filtration (e.g., vegetated buffers, hay wattles or bales, and silt screens). Other proper track-out systems can be used to prevent the spread of sediment from the site.</p> <ul style="list-style-type: none"> • Refueling shall be done outside of waterways unless equipment stationed in these locations cannot be readily relocated (e.g., pumps and generators). For stationary equipment that must be fueled on-site, secondary containment, such as a drain pan or drop cloth, shall be used to prevent accidental spills of fuels from reaching the soil, surface water, or the storm drain system. 			
<p>GEN-8 Dust Management Controls and Air Quality Protection The Contractor shall implement the following applicable Bay Area Air Quality Management District’s Basic Construction Mitigation Measures to reduce emissions of fugitive dust and equipment exhaust:</p> <ul style="list-style-type: none"> • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure [13 California Code of Regulations Section 2485]). • All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers on an as-needed basis. The use of dry power sweeping is prohibited. • All unpaved surfaces (e.g., parking areas, staging areas, soil piles, and graded areas, and unpaved access roads) shall be watered on an as-needed basis to control dust. 	County DPW or Contractor	During construction	
GEN-9 Pavement Saw-cutting Operations	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>The Contractor shall prevent any saw-cutting debris from entering nearby waterways. If wet methods are used, the Contractor shall vacuum slurry as cutting proceeds or collect all wastewater by constructing a sandbag sediment barrier. The bermed area shall be of adequate size to collect all wastewater and solids. The Contractor shall allow collected water to evaporate if the wastewater volume is minimal and if maintaining the ponding area does not interfere with public use of the street area or create a safety hazard.</p> <ul style="list-style-type: none"> • If approved by the Engineer, the Contractor may direct or pump saw-cutting wastewater to a dirt area and allow to infiltrate. The dirt area shall be adequate to contain all the wastewater. After wastewater has infiltrated, all remaining saw-cutting residue must be removed and disposed of properly. Remaining silt and debris from the ponding or bermed area shall be removed or vacuumed and disposed of properly. • If a suitable dirt area is not available, with the approval of the Engineer, the Contractor shall filter the saw-cutting wastewater through filtering materials and methods meeting Association of Bay Area Governments (ABAG) Standards for Erosion and Sedimentation Control Measures (latest edition) before discharging off-site. 			
<p>GEN-10 Concrete Operations</p> <p>The Contractor shall prevent the discharge of pollutants from concrete operations by properly disposing of waste, and by implementing the following practices:</p> <ul style="list-style-type: none"> • Store all materials in waterproof containers or under cover away from drain inlets or drainage areas. • Avoid mixing excess amounts of Portland cement material. • Do not wash out concrete trucks into storm drains, open ditches, streets, streams, etc. Whenever possible, perform washout of concrete trucks off site where discharge is controlled and not permitted to discharge into the storm drain system. For onsite washout, locate washout area at least 50 feet from storm drains, open ditches or other water bodies, preferably in a dirt area. Control 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>runoff from the area by constructing a temporary pit or bermed area large enough for the liquid and solid waste.</p> <ul style="list-style-type: none"> • Wash out concrete wastes into the temporary pit where the concrete can set, be broken up and then disposed of properly. If the volume of water is greater than what will allow concrete to set, allow the water to infiltrate and/or evaporate. Remove or vacuum the remaining silt and debris from the pond or beamed area and dispose of it properly. • Dispose of water from washing of exposed aggregate to dirt area. The dirt area shall be adequate to contain all the wastewater and once the wastewater has infiltrated, any remaining residue must be removed. If a suitable dirt area is not available, then the Contractor shall filter the wash water through straw bales or other filtering materials meeting ABAG Standards for Erosion and Sediment Control Measures before discharging to the sanitary sewer with approval from the Engineer. • Collect and return sweepings from exposed aggregate concrete and dispose of the waste in trash containers or truck to a certified landfill. • Ensure that poured concrete be excluded from the wetted channel for a period of 30 days (approximate) after it is poured. During that time, the poured concrete shall be kept moist, and runoff from the concrete shall not be allowed to enter the stream. Containment structures shall be installed to control the placement of wet concrete and to prevent it from entering the channel outside of those structures. Commercial sealants may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If sealant is used, water shall be excluded from the site until the sealant is dry. 			
<p>GEN-11 Fire Prevention All earthmoving and portable equipment with internal combustion engines shall be equipped with spark arrestors. During the high fire danger period (April 1–December 1), work crews shall:</p>	<p>County DPW or Contractor</p>	<p>During construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> • Have appropriate fire suppression equipment available at the work site. • Keep flammable materials, including flammable vegetation slash, at least 10 feet away from any equipment that could produce a spark, fire, or flame. • Not use portable tools powered by gasoline-fueled internal combustion engines within 25 feet of any flammable materials unless a round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area). 			
<p>GEN-12 Traffic Flow and Safety Measures</p> <ul style="list-style-type: none"> • Work shall be staged and conducted in a manner that maintains at least one open travel lane of traffic on roadways in the project area, where feasible. • Construction signs shall be posted at job sites warning the public of construction work and to exercise caution. • Any temporary one-lane closures shall include advance warning signage and other safety measures, as needed, to safeguard construction workers, provide safe passage for vehicles, and minimize traffic impacts. Work shall also be coordinated with local emergency service providers and local jurisdictions as necessary to ensure that emergency vehicle access and response is not impeded. • Where work is proposed adjacent to recreational trails, warning signs shall be posted several feet beyond the limits of work. • Access to driveways and private roads shall be maintained. If brief periods of maintenance would temporarily block access, property owners shall be notified prior to maintenance activities. 	County DPW or Contractor	During construction	
<p>GEN-13 Minimize Noise Disturbances to Residential Areas</p> <ul style="list-style-type: none"> • The County shall implement maintenance practices that minimize disturbances to residential areas surrounding work sites. • With the exception of emergencies, work shall be conducted during normal working hours (7:00 a.m. – 6:00 p.m.). • Construction activities shall not occur on Sundays or County observed holidays except during emergencies, or with approval by 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>the local jurisdiction and advance notification of surrounding residents. Advanced notification shall be provided 1-week prior to the start of construction to adjacent properties within 180 feet of a project site where heavy equipment shall be used.</p> <ul style="list-style-type: none"> Powered equipment (vehicles, heavy equipment, and hand equipment such as chainsaws) shall be equipped with adequate mufflers. 			
<p>GEN-14 Instream Work</p> <ul style="list-style-type: none"> Instream work shall be conducted from the top of bank to the maximum extent feasible. Any work using equipment within the stream channel shall be performed in isolation from a flowing stream. 	County DPW or Contractor	During construction	
<p>GEN-15 Dewatering Measures</p> <p>When work in an active channel is unavoidable, streamflow shall be diverted around the work area with use of a temporary dam or bypass according to the measures below and in conjunction with AMM BIO-1:</p> <ul style="list-style-type: none"> Prior to dewatering, the best means to bypass flow through the work area shall be determined to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic vertebrates. Instream cofferdams shall only be built from materials such as clean gravel, or rubber bladders which shall cause little or no siltation or turbidity. No earthen fill shall be used to construct the cofferdam. Streamflow shall be allowed to gravity flow around or through the work site using temporary bypass pipes or culverts. Bypass pipe diameter shall be sized to accommodate, at a minimum, twice the volume of the summer baseflow. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters to prevent amphibians from entering the pump system. On Black Mountain Creek, the intake pipe shall be fitted with fish screens meeting California Department of Fish and Wildlife (CDFW) and National Marine Fisheries Service (NMFS) criteria to prevent entrainment or impingement of small fish. 	County DPW or Contractor	During construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> • If necessary, discharged water shall pass over some form of energy dissipater to prevent erosion of the downstream channel. Silt bags shall be equipped to the end of discharge hoses and pipes to remove sediment from discharged water. • If used, temporary pump discharge pipes and hoses shall be designed to minimize turbidity and the potential to wash contaminants into the stream. A filtration/settling system shall be included to reduce downstream turbidity (e.g., filter fabric, turbidity curtain, etc.). The selection of an appropriate system is based on the rate of discharge. If feasible, water that is pumped into a pipe should discharge onto the top of bank into isolated local depressions, filter bags, settling (baker) tanks, or temporary sediment basins as necessary to meet water quality requirements • When construction is completed, the flow diversion structure shall be removed as soon as possible but no more than 48-hours after work is completed. When diversion structures are removed, to the extent practicable, the ponded flows shall be directed into the low-flow channel within the work site to minimize downstream water quality impacts. The diversion structures shall be removed beginning at the downstream limit in an upstream direction. 			
Aesthetics			
No additional AMMs included			
Agriculture and Forestry Resources			
No additional AMMs included			
Air Quality			
No additional AMMs included			
Biological Resources			
BIO-1 Relocation of Aquatic Species for Dewatering As identified above, before a work area is dewatered, fish and other aquatic vertebrates shall be captured and relocated to avoid injury and mortality and minimize disturbance. The following guidelines shall apply:	County DPW Biologist or Contractor	Prior to and during construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> • Before removal and relocation begins, a qualified biologist shall identify the most appropriate release location(s). Release locations should have water temperatures similar to the capture location and offer ample habitat for released aquatic species and should be selected to minimize the likelihood of reentering the work area or becoming impinged on the exclusion net or screen. • The means of capture shall depend on the nature of the work site and shall be selected by a qualified biologist who is experienced with capture and handling protocols for fish and aquatic species. Pumping down the pool and then seining or dipnetting shall be the primary method of capture and relocation of aquatic species. Electrofishing shall be used only as a last resort; if electrofishing is necessary, it shall be conducted only as approved by U.S. Fish and Wildlife Service (USFWS), NMFS, and CDFW, and by properly trained personnel following the NMFS Guidelines dated June 2000. • Before and after each relocation effort all equipment shall be properly sterilized to ensure it is free of aquatic pathogens or invasive species. Equipment sterilization shall follow prevention Best Management Practices such as those prepared by CDFW’s Northern Region, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=92821&inline, or other methodology accepted by CDFW in writing. • To the extent feasible, relocation shall be performed during morning periods. Air and water temperatures shall be measured periodically, and relocation activities shall be suspended if temperatures exceed the limits allowed by NMFS guidelines. • To prevent aquatic species from reentering the work area, the channel shall be blocked by placing fine-meshed nets or screens above and below the work area. To minimize entanglement, mesh diameter shall not exceed 1/8 inch. The bottom edge of the net or screen shall be secured to the channel bed to prevent fish from passing under the screen. Exclusion screening shall be placed in low velocity areas to minimize impingement. Screens shall be checked periodically and cleaned of debris to permit free flow of water. 			

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> • Handling of aquatic vertebrates shall be minimized. When handling is necessary, personnel shall wet hands or nets before touching them. • Fish shall be held temporarily in cool, shaded water in a large container with a lid. Overcrowding in containers shall be avoided. Aeration shall be provided with a battery-powered external bubbler. Fish shall be protected from jostling and noise and shall not be removed from the container until the time of release. A thermometer shall be placed in each holding container and partial water changes shall be conducted as necessary to maintain a stable water temperature. If water temperature reaches or exceeds NMFS limits, fish shall be released and relocation operations shall cease. • If fish are abundant, capture shall cease periodically to allow release and minimize the time fish spend in holding containers. • Fish shall not be anesthetized or measured. However, they shall be visually identified to species level, and year classes shall be estimated and recorded. • Reports on fish relocation activities shall be submitted to CDFW and NMFS in a timely fashion. • If mortality during relocation exceeds 5%, relocation shall cease and CDFW and NMFS shall be contacted immediately or as soon as feasible. • When feasible, initial fish relocation efforts shall be performed prior to the scheduled start of construction. The fisheries biologist shall perform a survey on the same day before construction begins to verify that no fish have moved back into the work area. • A biological monitor shall check daily for stranded aquatic life in areas that have been dewatered or that contain surface waters. 			
<p>BIO-2 Protection of Special-Status Amphibian and Reptile Species</p> <ul style="list-style-type: none"> ▪ At least seven (7) calendar days prior to the onset of project construction, a USFWS- or CDFW-approved biologist(s) shall conduct pre-construction surveys for special status amphibian and reptile species. 	<p>County DPW Biologist or Contractor</p>	<p>Prior to and during construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> ▪ If special status species are found at any time during project activities, work at that location shall cease and USFWS and CDFW will be contacted. The County or its Contractors shall prepare a relocation plan for moving special status species from the project area. ▪ Only USFWS- or CDFW-approved biologists shall participate in activities associated with the capture, handling, and monitoring of special status amphibians and reptile species. ▪ Biologists involved with the surveying/handling of the special status amphibians and reptile species shall employ sterilization techniques appropriate to avoid the transmission of chytrid fungus to or from the site. ▪ Biologists shall limit the duration of handling and captivity of rescued species. While in captivity, individuals of these species shall be kept in a cool, moist, aerated environment, such as a bucket containing a damp sponge. Containers used for holding or transporting adults of these species shall not contain any standing water. ▪ Biologist(s) and on-site biological monitor(s) shall have the authority to and shall halt any action that might result in effects that exceed the levels anticipated by the USFWS or CDFW during review of the proposed action. If work is stopped, the USFWS or CDFW shall be notified within one (1) working day of the incident by the approved biologist or on-site biological monitor. ▪ To prevent inadvertent entrapment of listed species, all excavated steep-walled holes or trenches should be covered at the end of each workday with plywood or similar materials. If this is not possible, one or more escape ramps constructed of earth fill or wooden planks should be established in the hole. Before such holes or trenches are filled, they shall be thoroughly inspected for animals. ▪ Avoid storage of any pipes measuring four (4) inches or greater in diameter at the site, or seal the ends of any such pipes with tape as they are brought to the site, to prevent any special status species from entering and becoming trapped in pipes. 			
BIO-3 Northern Spotted Owl	County DPW Biologist or Contractor	Prior to and during construction	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>Project activities that involve tree removal, excavation, or grading within 500 yards of a known northern spotted owl (NSO) (<i>Strix occidentalis caurina</i>) nest site are subject to the requirements described below, unless separate project mitigation measures have been adopted that override these requirements:</p> <ul style="list-style-type: none"> ▪ Construction activities that may disturb NSO shall be conducted outside the nesting season (February 1 – July 31). ▪ If conducting construction activities outside of NSO nesting season is infeasible and construction or tree removal needs to occur within the nesting season, a USFWS protocol-level survey shall first be conducted by a qualified biologist. If no NSO are detected during survey(s), no further action is required, and construction activities shall occur within 1-week of the survey. ▪ If active NSO nests are observed during the survey(s), a disturbance-free buffer zone of 500 yards shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist. ▪ Pre-construction surveys shall be documented and provided to the County by the qualified biologist. If construction fencing is required, photographs of the fencing, directly after installation, shall be submitted to the County. 			
<p>BIO-4 Nesting Birds</p> <p>To the extent feasible, construction activities shall be scheduled to avoid the nesting season (February 1 – August 15).</p> <ul style="list-style-type: none"> ▪ If it is not possible to schedule project activities outside the nesting bird, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no nests shall be disturbed during project implementation. These surveys shall be conducted no more than seven days prior to the initiation of project activities, including tree and vegetation removal. During this survey, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ruderal grasslands, and structures) in and immediately adjacent to the construction areas for nests. Preconstruction surveys shall be provided to the County by the qualified biologist. ▪ If an active nest is found sufficiently close to work areas to be disturbed by these activities, a non-disturbance buffer zone shall be established 	<p>County DPW Biologist or Contractor</p>	<p>Prior to and during construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>around the nest at the biologist's discretion and in accordance with regulatory permits and conditions to ensure that no nests of species protected by the Migratory Bird Treaty Act and California Fish and Game Code shall be disturbed during project implementation. The boundary of each buffer zone shall be marked with orange construction fencing if work shall occur immediately outside the buffer zone. All protective buffer zones shall be maintained until the nest becomes inactive, as determined by a qualified biologist. If construction fencing is required, photographs of the fencing, directly after installation shall be submitted to the County.</p>			
<p>BIO-5 Dusky-footed Woodrat</p> <p>A qualified biologist shall conduct surveys for San Francisco dusky-footed woodrat nests within the project area within 30 days of the start of project activities. If no nests are found, then no further measures shall be warranted. If nests are found, then the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▪ A minimum 10-foot non-disturbance buffer shall be maintained between construction activities and each nest. In some situations, a smaller buffer may be allowed if in the opinion of a qualified biologist removing the nest would be a greater impact than that anticipated as a result of project activities. ▪ If a dusky-footed woodrat house(s) cannot be avoided, CDFW shall be notified and information regarding the house location(s) and relocation plan shall be provided. With approval from CDFW, a qualified biologist shall dismantle and relocate the house material. No less than 10 days prior to the beginning of construction a qualified biologist shall deconstruct the house by hand. Materials from the house shall be dispersed into adjacent suitable habitat that is outside of the work area. During the deconstruction process the biologist shall attempt to assess if there are juveniles in the house. If immobile juveniles are observed, the deconstruction process shall be discontinued until a time when the biologist believes the juveniles shall be fully mobile. A 25-foot-wide no-disturbance buffer shall be established around the house until the juveniles are mobile. The house may be dismantled once the biologist has determined that adverse effects on the juveniles would not occur. All 	<p>County DPW Biologist or Contractor</p>	<p>Prior to and during construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<p>disturbances to woodrat houses shall be documented in a construction monitoring report and submitted to CDFW.</p>			
<p>BIO-6 Bat Colonies To minimize impacts on bat maternity colonies during the maternity season (March 15 – August 31) or non-reproductive roosting bats during the non-maternity season (September 1 – March 14) a pre-activity survey for roosting bats shall be conducted prior to the onset of ground-disturbing activities. A qualified biologist shall conduct a survey to look for evidence of bat use within suitable habitat. If evidence of use is observed, or if high-quality roost sites are present in areas where evidence of bat use might not be detectable (such as a tree cavity), an evening emergence survey and/or a nocturnal acoustic survey may be necessary to determine if a bat colony is present and to identify the specific location of the bat colony.</p> <ul style="list-style-type: none"> ▪ If no active maternity colony or non-breeding bat roost is located, project work can continue as planned. ▪ If an active maternity colony or non-breeding roost is located, the project work shall be modified to avoid disturbance of the roosts, if feasible. ▪ If an active maternity colony is located and project work cannot be modified to avoid removal or disturbance of the occupied tree, disturbance shall be scheduled to take place outside the maternity roost season (March 15–August 31), and a non-disturbance buffer zone (determined by a qualified biologist) shall be implemented during the maternity roost season. ▪ If an active non-breeding bat roost is located and project work cannot be modified to avoid removal of the occupied tree, the tree shall be removed using a two-day phased method as follows: Day 1, under supervision of a qualified biologist, tree limbs not containing suitable bat roosting habitat shall be removed using chainsaws only; then, Day 2, the rest of the tree can be removed. The qualified biologist shall submit written confirmation to the County that appropriate measures have been undertaken. 	<p>County DPW Biologist or Contractor</p>	<p>Prior to and during construction</p>	
Cultural Resources			
<p>CUL-1 Cultural Resources and Human Remains</p>	<p>County DPW or Contractor</p>	<p>During construction</p>	

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<ul style="list-style-type: none"> • If cultural or paleontological resources are encountered during the project, the contractor shall stop work within 35 feet of a find and protect the find until the County can notify a Professional Archaeologist or other such qualified individual to review the discovery. • Project personnel shall not collect or retain found cultural resources. • The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activity within the project area shall comply with applicable State laws. This shall include immediate notification of the Marin County Coroner. • In the event of the coroner’s determination that the human remains are Native American, notification of the Native American Heritage Commission (NAHC) is required. The NAHC shall be notified by phone within 24 hours of the discovery and shall be afforded the opportunity to appoint a Most Likely Descendant (MLD) (Public Resources Code Section 5097.98). 			
Energy			
No additional AMMs included			
Geology, Soils, and Seismicity			
No additional AMMs included			
Greenhouse Gas Emissions			
No additional AMMs included			
Hazards and Hazardous Materials			
No additional AMMs included			
Hydrology and Water Quality			
No additional AMMs included			
Land Use and Planning			
No additional AMMs included			

Avoidance and Minimization Measure	Responsible Party	Timing of Implementation	Completion Date and Initials
<i>Mineral Resources</i>			
No additional AMMs included			
<i>Noise</i>			
No additional AMMs included			
<i>Population and Housing</i>			
No additional AMMs included			
<i>Public Services and Utilities</i>			
No additional AMMs included			
<i>Recreation</i>			
No additional AMMs included			
<i>Transportation and Traffic</i>			
No additional AMMs included			
<i>Tribal Cultural Resources</i>			
No additional AMMs included			
<i>Wildfire</i>			
No additional AMMs included			

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Attachment B

Comments Received on the IS/MND

From: [EnvPlanning](#)
To: [Swenerton, Betsy](#)
Cc: [Hall, Chelsea](#)
Subject: FW: West Marin Drainage Rehabilitation - Caltrans Comments
Date: Tuesday, August 23, 2022 10:40:40 AM
Attachments: [image001.png](#)

FYI:

From: Ayon, Llisel@DOT <Llisel.Ayon@dot.ca.gov>
Sent: Monday, August 22, 2022 11:34 AM
To: EnvPlanning <EnvPlanning@marincounty.org>
Subject: West Marin Drainage Rehabilitation - Caltrans Comments

You don't often get email from llisel.ayon@dot.ca.gov. [Learn why this is important](#)

Hello Betsy,

Thank you for including Caltrans in the review process for this project. The following comments are based on our review of the provided materials. If you have any questions regarding these comments or require any additional information, please feel free to contact me at this email address or the phone number listed below.

Construction-Related Impacts

Potential impacts to the State Right-of-Way (ROW) from project-related temporary access points should be analyzed. Mitigation for significant impacts due to construction and noise should be identified. Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, visit: <https://dot.ca.gov/programs/traffic-operations/transportation-permits>. Prior to construction, coordination may be required with Caltrans to develop a Transportation Management Plan (TMP) to reduce construction traffic impacts to the State Transportation Network.

Thank you,

Llisel Ayon

Associate Transportation Planner
Local Development Review
California Department of Transportation – District 4
Cell: (510) 506-6184





State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



September 13, 2022

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
3501 Civic Center Drive, Room 304
San Rafael, CA 94903
envplanning@marincounty.org

Subject: West Marin Drainage Rehabilitation, Mitigated Negative Declaration,
SCH No. 2022080435, Marin County

Dear Ms. Swenerton:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt a Mitigated Negative Declaration (MND) from Marin County Department of Public Works (County) for the West Marin Drainage Rehabilitation (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

CDFW is submitting comments on the MND to inform the County, as the Lead Agency, of potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under CEQA pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA) or Native Plant Protection Act, the Lake and Streambed Alteration Program, or other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in take² of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

² Take is defined in Fish and Game Code section 86 as hunt, pursue, catch, capture, or kill, or attempt any of those activities.

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 2 of 10

measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA ITP. **The Project has the potential to impact Coho salmon (Central California Coast Evolutionarily Significant Unit) (*Oncorhynchus kisutch* population 4), a CESA listed as endangered species, as further described below.**

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species. (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, & 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

Lake and Streambed Alteration (LSA) Agreement

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. **The MND indicates that the Project would submit an LSA Notification for impacts to Nicasio Creek, Lagunitas Creek, and other streams, as further described below.** CDFW will consider the CEQA document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

Migratory Birds and Raptors

CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include sections 3503, 3503.5, and 3513. Fully protected species may not be taken or possessed at any time (Fish & G. Code, § 3511). Migratory birds are also protected under the federal Migratory Bird Treaty Act.

PROJECT DESCRIPTION SUMMARY

Proponent: Marin County Department of Public Works

Objective: Repair or replace thirty-two culverts and three eroded roadside embankments. Project activities may include dewatering the work areas.

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 3 of 10

Location: Project construction will take place over approximately 14 miles of roadway in three distinct road segments: (1) Point Reyes – Petaluma Road between Highway 1 and Platform Bridge Road in Point Reyes Station; (2) Lucas Valley Road west from Milepost (MP) marker 5.29 at Big Rock to the intersection with Nicasio Valley Road in Nicasio; and (3) Nicasio Valley Road from the intersection with Sir Francis Drake Boulevard in San Geronimo Valley to the intersection with Lucas Valley Road. The Project is within Marin County. GPS coordinates of the approximate Project centroid are 38.059508, -122.719305.

Timeframe: Work is proposed to start and be completed between June 1 and October 31, 2023. Work may take place before or after this window if authorized by regulatory permits and conditions.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document. Based on the Project's avoidance of significant impacts on biological resources with implementation of mitigation measures, including those CDFW recommends, CDFW concludes that a Mitigated Negative Declaration is appropriate for the Project.

I. Mitigation Measures and Related Impact Shortcoming

MANDATORY FINDING OF SIGNIFICANCE. *Does the Project have potential to substantially reduce the number or restrict the range of an endangered, rare or threatened species?*

COMMENT 1: Coho Salmon (Central California Coast ESU) and Steelhead (Central California Coast DPS) (*Oncorhynchus mykiss* population 8) Section 3, Page 3-35

Issue: The MND indicates that a CESA ITP for Coho salmon will be obtained "if necessary" (page 2-26) and does not clearly evaluate if impacts to Coho salmon may occur or if an ITP is necessary.

Further, Avoidance and Minimization Measure (AMM) GEN-15 (Dewatering Measures) does not include a requirement that equipment, including heavy equipment, dewatering equipment, boots, waders, and hand tools, be cleaned between sites to prevent the spread of New Zealand mudsnail (*Potamopyrgus antipodarum*) and other invasive species harmful to salmonids.

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 4 of 10

Specific impacts, why they may occur and be potentially significant: Project impacts to Coho salmon could occur as a result of Project activities described in the MND including dewatering and relocation, Project-related erosion or sedimentation, change in bed substrate, or accidental leaks or spills of hazardous materials (page 3-53).

Additionally, uncleaned equipment that is used in different streams may carry New Zealand mudsnails and other invasive species to the streams. High density New Zealand mudsnail populations may cause substantial adverse impacts to Coho salmon and steelhead by replacing preferred, nutritious foods. Vinson and Baker (2008) showed that wild salmonids with New Zealand mudsnail in their guts had significantly poorer body conditions than those without. In feeding trials, rainbow trout (*Oncorhynchus mykiss*) fed an exclusive diet of unlimited New Zealand mudsnail passed 54% of mudsnails through the digestive tract alive, and subsequently lost up to 0.48% of their initial body weight each day, which is nearly equal to the impact of starvation.

Mortality of Coho salmon or steelhead associated with the above activities or the introduction of New Zealand mudsnails could substantially reduce the number and restrict the range of these species which are considered endangered, rare or threatened species, triggering a mandatory finding of significant impact (CEQA Guidelines, § 15065).

Recommended Mitigation Measures: To reduce potential impacts to Coho salmon and steelhead to less-than-significant, CDFW recommends clearly evaluating if impacts to Coho salmon may occur and including the below mitigation measure and modifying AMM GEN-15 (Dewatering Measures), as outlined below.

- The Project shall consult with CDFW to determine if impacts to Coho salmon may occur and obtain a CESA ITP for any take of the species that may occur during Project activities such as relocation efforts, dewatering, Project-related erosion or sedimentation, changes in bed substrate, or accidental leaks or spills of hazardous materials.
- All equipment that comes into contact with water or sediment in a stream, including the dewatering pump and other portions of the dewatering system, shall be properly sterilized to ensure it is free of aquatic pathogens or invasive species. Equipment sterilization shall follow prevention Best Management Practices such as those prepared by CDFW's Northern Region³, or other methodology accepted by CDFW in writing.

³ CDFW, 2016. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=92821&inline>

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 5 of 10

Would the Project 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 CDFW or United States Fish and Wildlife Service (USFWS)?

COMMENT 2: California Red-Legged Frog (*Rana draytonii*), Foothill Yellow-Legged Frog (Northwest/North Coast Clade) (*Rana boylei*), and Western Pond Turtle (*Emys marmorata*), Section 2, Page 2-45

Issue: AMM BIO-2 (Protection of Special-Status Amphibian and Reptile Species) requires that surveys occur at least seven calendar days prior to the onset of Project construction; however, surveys should also occur closer to the start of Project construction.

Specific impacts, why they may occur and be potentially significant: California red-legged frog, foothill yellow-legged frog, and Western pond turtle may move to work sites between the survey and the start of work at a particular site. These animals may be crushed, entombed, or killed in other ways if it is not known that they are present. The survey requirements in BIO-2 could be interpreted as applying to the entire Project, i.e., a pre-construction survey covering all thirty-five work sites would be conducted at least seven calendar days prior to the start of construction at the first work site. With this survey schedule, the above special-status animals could have several months to move to the last sites where work occurs and may be present at these sites without the knowledge of the County or construction personnel.

California red-legged frog, Western pond turtle, and the Northwest/North Coast Clade of foothill yellow-legged frog are California Species of Special Concern (SSC). California red-legged frog is also listed as threatened under the federal Endangered Species Act. The SSC designation is given to species native to California satisfying one or more of the following criteria: 1) is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role; 2) is listed as Federally-, but not State threatened or endangered; 3) meets the State definition of threatened or endangered but has not formally been listed; 4) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or 5) has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status. Based on the above statuses, if California red-legged frog, Western pond turtle, or foothill yellow-legged frog are present at the Project locations, impacts to them such as crushing or entombment would be potentially significant.

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 6 of 10

Recommended Mitigation Measures: To reduce potential impacts to California red-legged frog, foothill yellow-legged frog, and Western pond turtle to less-than-significant, CDFW recommends including the mitigation measures below.

California Red-Legged Frog Habitat Assessment and Surveys. At least two weeks prior to the commencement of ground-disturbing activities, the Project area and nearby vicinity, including a minimum 500-foot radius surrounding the Project activity area, shall be assessed by a Qualified Biologist for the presence of California red-legged frog individuals and habitat features. Habitat features include both aquatic habitat such as plunge pools and ponds and terrestrial habitat such as burrows or other refugia. If habitat occurs, then no more than 48 hours prior to ground-disturbing activities the area shall be surveyed by a Qualified Biologist. The results of the habitat feature assessment and survey shall be submitted to CDFW for written acceptance prior to starting Project activities. Burrows and refugia sites shall be flagged or otherwise marked for avoidance; Project activities shall avoid habitat features to the extent feasible. If California red-legged frogs are encountered during the assessment or Project activities, the Project shall not proceed or all work shall cease, and CDFW shall immediately be notified. Work shall not proceed until the frog, through its own volition, moves out of harm's way and CDFW has provided permission in writing to proceed with the Project. If California red-legged frog is encountered or the Qualified Biologist determines that impacts to the species are likely to occur, the Project shall consult with USFWS pursuant to the federal Endangered Species Act and receive written approval from CDFW prior to the impact. In this case, CDFW may require additional protection measures which shall be implemented by the Project.

Foothill Yellow-Legged Frog Survey Methodology. A Qualified Biologist shall provide a foothill yellow-legged frog survey methodology to CDFW for review and written approval no less than 30 days prior to beginning Project activities, unless CDFW approves otherwise in writing. No Project activities shall begin until foothill yellow-legged frog surveys have been completed using a method approved by CDFW. Survey methodology shall target all life stages and shall have an adaptive management approach based on the stream conditions at the time of surveys (i.e., whether ponded or flowing water is present, or whether the stream has been completely dry for less than 30 days). Surveys within and adjacent to the Project activity area shall include searching suitable habitat including but not limited to cavities under rocks, within vegetation such as sedges and other clumped vegetation, and under undercut banks, no less than 50 feet from the streambed and 500 feet upstream and downstream of the Project activity area. Surveys should be conducted at different times of day and under variable weather conditions if possible.

Foothill Yellow-Legged Frog Surveys. Prior to starting Project activities, a Qualified Biologist shall conduct surveys for foothill yellow-legged frog using a CDFW-approved methodology (see above Mitigation Measure). If foothill yellow-legged frogs, their eggs,

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 7 of 10

or any other special-status species, are found, CDFW shall be notified immediately and construction shall not occur without written approval from CDFW allowing the Project activities to proceed. If foothill yellow-legged frog egg masses are observed in a stream that is scheduled for dewatering, dewatering shall not occur until an egg mass relocation plan is approved in writing by CDFW and implemented. In the event adult foothill yellow-legged frogs are observed, a temporary wildlife exclusion fence shall be installed, if requested by CDFW, to prevent frogs and/or other special-status species from entering the work site. The results of the survey shall be submitted to CDFW for written acceptance prior to starting Project activities. If the Project has collected data that the stream has been completely dry for greater than 30 days prior to starting Project activities, and no water or moist areas within the streambed exist within 500 feet upstream and downstream of the Project, then the Project may request CDFW written approval that surveys for foothill yellow-legged frogs are not necessary.

Western Pond Turtle Surveys. No more than two weeks prior to the commencement of ground-disturbing activities, a Qualified Biologist shall perform surveys for Western pond turtles within aquatic and upland habitat at the Project. Surveys will encompass individual turtles and nest sites. An additional survey shall occur no more than 48 hours prior to Project activities. If a pond turtle or nest site is detected at any time, CDFW shall be notified immediately. Survey results shall be submitted to CDFW prior to construction activities. All Western pond turtles observed on-site shall be avoided and allowed to leave the Project activity area of their own volition or may be relocated with prior written approval from CDFW. Any turtle nest sites shall be avoided with an appropriate buffer identified by a Qualified Biologist and accepted in writing by CDFW.

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS?

Comment 3: Stream alteration, Page 3-62

Issue: The MND identifies that the Project would result in temporary impacts to riparian habitat which would “regenerate naturally”, and tree replacement is proposed. However, 1) the temporal loss of riparian habitat and maintenance and monitoring of restored sites, such as invasive species removal to ensure successful restoration, is not addressed, and 2) the replacement ratios of removed trees is unclear. Therefore, impacts to riparian habitat may not be reduced to less-than-significant. It is also unclear if permanent impacts to riparian habitat would occur. Additionally, the MND indicates that an LSA Notification would be required to comply with Fish and Game Code section 1600 et. seq.; however, there is no mitigation measure requiring this action.

Specific impacts, why they may occur and be potentially significant: The MND states that temporary impacts to sensitive riparian habitat are likely to occur through tree

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 8 of 10

removal, vegetation clearing around culvert inlets/outlets, and slip-out repair (page 3-62). An estimated 2 to 7 percent of California's riparian habitat remains intact and has not been converted to other land uses (Katibah 1984, Dawdy 1989). Riparian buffers help keep pollutants from entering adjacent waters through a combination of processes including dilution, sequestration by plants and microbes, biodegradation, chemical degradation, volatilization, and entrapment within soil particles. Narrow riparian buffers are considerably less effective in minimizing the effects of adjacent development than wider buffers (Castelle et al. 1992, Brosofske et al. 1997, Dong et al. 1998, Kiffney et al. 2003, Moore et al. 2005). Riparian trees and vegetation, and associated floodplains, provide many essential benefits to stream and aquatic species habitat (Moyle 2002, CDFW 2007), including thermal protection, cover, and large woody debris. Development adjacent to the riparian zone can result in fragmentation of riparian habitat and decreases in native species abundance and biodiversity (Davies et al. 2001, Hansen et al. 2005, CDFW 2007). Riparian habitat including connected wetland tributaries is of critical importance to protecting and conserving the biotic and abiotic integrity of an entire watershed. When riparian habitat is substantially altered, riparian functions become impaired, thereby likely substantially adversely impacting aquatic and terrestrial species. Removing connected wetland habitat may result in the degradation of riparian habitat. Therefore, if the above impacts to riparian habitat occur and adequate restoration is not provided, project impacts to riparian habitat would be potentially significant.

Recommended Mitigation Measure: To reduce impacts to riparian habitat to less-than-significant, CDFW recommends including the following mitigation measure:

The Project shall submit to CDFW an LSA Notification for the impacts to lakes or streams prior to commencement of Project activities and comply with the LSA Agreement, if issued. The Notification shall include habitat restoration or preservation at a minimum ratio of 3:1 based on area and linear distance of permanent impacts and on-site restoration of temporary impacts. Habitat restoration shall occur in the same calendar year as the impact on-site or as close to the site as possible within the same stream or watershed, unless otherwise approved in writing by CDFW. If mitigation is not possible within the same stream or watershed, mitigation ratios may increase at the discretion of CDFW.

To mitigate for the removal of trees, replacement trees shall be planted at the below minimum replacement to removal ratios, unless otherwise approved in writing by CDFW:

- 1:1 for removal of non-native trees;
- 1:1 for removal of native trees up to 3 inches at diameter breast height (dbh)
- 3:1 for removal of native trees 4 to 6 inches dbh (excluding oak (*Quercus* sp.) trees);

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 9 of 10

- 6:1 for removal of native trees greater than 6 inches dbh (excluding oak (*Quercus* sp.) trees);
- 4:1 for removal of oak trees up to 6 inches dbh;
- 5:1 for removal of oak trees between 7 and 15 inches dbh; and
- 10:1 for removal of oak trees greater than 15 inches dbh.

The Project shall monitor and maintain, as necessary, all plants for five years to ensure successful revegetation. Planted trees, oak trees, and other vegetation shall each have a minimum of 85 percent survival at the end of five years. If revegetation survival and/or cover requirements do not meet established goals as determined by CDFW, the Project is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for five years after planting.

Please be advised that an LSA Agreement obtained for this Project would likely require the above recommended mitigation measures, as applicable.

II. Editorial Comments and/or Suggestions

Comment 4: Avoidance and Minimization Measures, Section 2, Page 2-24

It is not clear if the AMMs incorporated into the design of the Project are enforceable mitigation measures. CDFW recommends that the MND list AMMs as mitigation measures if they are necessary to reduce Project impacts to less-than-significant.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be filled out and submitted online at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 10 of 10

ENVIRONMENTAL DOCUMENT FILING FEES

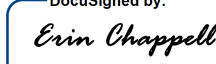
The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist the County in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Alex Single, Environmental Scientist, at (707) 799-4210 or Alex.Single@wildlife.ca.gov; or Melanie Day, Senior Environmental Scientist (Supervisory), at Melanie.Day@wildlife.ca.gov or (707) 210-4415.

Sincerely,

DocuSigned by:

Erin Chappell
Regional Manager
Bay Delta Region

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2022080435)

REFERENCES

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Betsy Swenerton, Senior Project Manager
Marin County Department of Public Works
September 13, 2022
Page 11 of 10

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From: [Hall, Chelsea](#)
To: [Swenerton, Betsy](#)
Cc: [Taylor, Tammy](#); [Kull, Kallie](#)
Subject: FW: Comment on West Marin Drainage Project
Date: Tuesday, September 20, 2022 2:36:12 PM

Hi Betsy,

I'm assuming you already received the comment below from Gordon Bennett, but forwarding just in case.

Thank you,

Chelsea Hall | County of Marin
Environmental Planning & Housing Aide
Community Development Agency
Office #: 415-473-2267

From: gbatmuirb@aol.com
Date: July 9, 2022 at 11:22:09 AM PDT
To: djrodoni4@gmail.com
Reply-To: gbatmuirb@aol.com

You're working on county-wide issues, while I'm working on culvert-wide issues :~)

Gordon

June 28, 2022

To: Betsy Swenerton, Marin County DPW
(BSwenerton@marincounty.org)

Re: June 10, 2022 Presentation to the Lagunitas Technical Advisory Committee

Betsy: A follow up on comments made at the Lag TAC and a reminder that the TAC is awaiting your responses to **questions** raised at the meeting.

Questions:

- 1) Whether the determination of culverts that are on salmon-streams was based on streams that currently host salmon or was any

consideration given to streams that historically hosted salmon (and thus may within the lifetime of the culverts again host salmon as salmonid habitat restoration progresses).

- 2) The logic in choosing culvert size based on a “10-year” storm criteria appears too conservative. In that decision, was only historical data considered, or was any consideration given to apparent climate-change-driven increases in storm intensity that seem to result in 100-year storms every few years? And was that decision made at the high, low, or middle of the error bar of calculations?
- 3) When culvert lengths were proposed to be extended to prevent scour at the roadside, was any consideration given to preventing scour at the new discharge location or was the decision to simply down-stream the scour problem rather than resolve it?
- 4) What data drove the general decision not to install debris racks at every culvert? It was pointed out by a TAC member that data showed a simple post (vs a rack) at the upstream mouth of the culvert served to adequately position wood lengths to travel through (rather than block) a culvert.

Comment re PRP MP 12.23 (Point Reyes/Petaluma Road Salmonid Culvert)

TAC members expressed concern about retrofitting (vs replacing) this culvert. Photos indicated rust halfway up the culvert, though a TAC member noted that the rule-of-thumb for adequate culvert size is rust in the bottom one-third only. Thus the culvert appears significantly undersized now. Unfortunately, the retrofit proposes to further reduce culvert capacity by decreasing the circumference by 4” which decreases cross-sectional capacity by ~12%. Adding 6” of rock on the bottom further reduces the hydraulic capacity of an already-undersized culvert.

Decreased hydraulic capacity increases pressure at the upstream end of the already-undersized culvert and increases the chance of a catastrophic blow-out that could cause long-term and extensive damage to salmonid habitat as well as greater and longer-lasting inconvenience to roadway users.

What data was used to determine that the “inconvenience” of replacing the culvert was so great that only a retrofit was proposed? According to Google maps, the driving time from the Platform Bridge Road / Pt Reyes Petaluma Road intersection to Pt Reyes Station is 7 minutes via the latter road and 12 minutes via the former road...a 5-minute difference that could be reduced by removing the stop sign at that intersection to allow traffic to flow freely between Platform Bridge Road and Pt Reyes / Petaluma Road.

At least one or more lanes of the Pt Reyes / Petaluma Road are seemingly regularly closed already for re-paving, roadside mowing, culvert cleaning, or PG&E tree trimming. What is the estimated construction time for a

culvert replacement and would such a replacement necessarily require closure of both lanes for the entire time?

It would seem that a catastrophic blow out of the already undersized culvert (proposed to be further undersized) would create a much longer-lasting inconvenience (to both salmon and roadway users) than a carefully planned replacement and if so, then calls into question whether the proposed retrofit fulfills two of the project goals, namely to *“Provide cost-effective service and value for citizen taxes and public funding”*...and to *“Avoid and minimize potential impacts to the natural environment.”*

Lastly, additional time for a more careful review of the 6/10/22 presentation revealed another potential issue. The design drawing for PRP MP 12.23 note #12 states, *“Protect in place (E) 4” and 1½” PVC pipes routed through culvert.”* These pipes are presumably diverting water from Lagunitas Creek, but a cursory review of the State Water Board’s [e-WRIMS Water Right data](#) does not appear to show any water rights in this area. Was any review done (i.e. before the pipes are literally cemented in place) of the water rights that should properly be associated with these pipes if they are to remain?

Thank you in advance for responding to the questions raised at the 6/10/22 TAC meeting...for consideration of the comments that I and other TAC members made at that meeting...and for questions and comments made here as follow up. Other TAC members may also have additional comments.

Respectfully,