

**DWR PERRIS DAM
EMERGENCY RELEASE FACILITY**

**Addendum No. 2
SCH No. 2013091027**

**Prepared for
Department of Water Resources**

December 2022



DWR PERRIS DAM EMERGENCY RELEASE FACILITY

**Addendum No. 2
SCH No. 2013091027**

**Prepared for
Department of Water Resources**

December 2022

**626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300
www.esassoc.com**



Bend	Oakland	San Diego
Camarillo	Orlando	San Francisco
Delray Beach	Pasadena	Santa Monica
Destin	Petaluma	Sarasota
Irvine	Portland	Seattle
Los Angeles	Sacramento	Tampa

170020.26

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

DWR Perris Dam Emergency Release Facility Addendum No. 2

	<u>Page</u>
1.0 Introduction.....	1
1.1 Purpose of the Addendum	1
1.2 Regulatory Background	1
2.0 Certified Project Overview	2
2.1 Project Description.....	2
2.2 Public Participation and Proposed Project Approval.....	6
3.0 Objectives of the Proposed Project	7
4.0 Description of Proposed Modifications	7
4.1 Channel Underdrain.....	7
4.2 Coated Wire Mesh for the Proposed Levee System	8
4.3 Traffic Detour Mitigation.....	11
4.4 Parcel Transfer	12
5.0 Proposed Modifications Construction	12
5.1 Schedule.....	12
5.2 Proposed Channel Underdrain	12
5.3 Coated Wire Mesh along Proposed Levees	14
5.4 Traffic Detour Mitigation.....	14
5.5 Parcel Transfer	14
6.0 Proposed Modification Operations	14
7.0 Environmental Setting and Analysis.....	14
7.1 Air Quality/Greenhouse Gas Emissions.....	15
7.2 Biological Resources	16
7.3 Cultural Resources	17
7.4 Hydrology and Water Quality	17
7.5 Noise	19
7.6 Recreation	19
7.7 Transportation and Traffic.....	20
8.0 Summary of Effects	21

Table of Contents

	<u>Page</u>
List of Figures	
Figure 1 Regional Location	3
Figure 2 Proposed Modifications	5
Figure 3 Proposed Channel Underdrain Conceptual Design	9
Figure 4 Proposed Levee Modification with Coated Wire Mesh.....	10
Figure 5 Proposed Modification Haul Route	13

DWR PERRIS DAM EMERGENCY RELEASE FACILITY

Addendum No. 2

1.0 Introduction

1.1 Purpose of the Addendum

The purpose of this Addendum is to evaluate the potential environmental effects associated with proposed modifications to the Perris Dam Emergency Release Facility (ERF) Project (Project). The Final Environmental Impact Report (EIR) for the Project was certified and approved by the California Department of Water Resources (DWR) in May 2018. After certification of the Final EIR, modifications to the Project were identified and analyzed in the DWR Perris Dam Emergency Release Facility, Addendum No. 1 which was finalized in September 2020.

Since Addendum No. 1, additional Project modifications have been proposed, which include: the implementation of a groundwater collection system under the proposed ERF channel, the implementation of a coated wire mesh along the proposed levee system, and minor changes to the transportation mitigation measure. Other Project components as described in the certified EIR, which includes Addendum No. 1 modifications would remain the same and would still be implemented as part of the proposed Project.

1.2 Regulatory Background

Section 15164(a) of the CEQA Guidelines provides that an addendum to a previously certified EIR for a Project is permissible if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. A subsequent EIR must be prepared if:

1. Substantial changes are proposed in the Project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the Project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

- a. The Project will have one or more significant effects not discussed in the previous EIR or negative declaration;
- b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponents decline to adopt the mitigation measure or alternative; or
- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the Project proponents decline to adopt the mitigation measure or alternative.

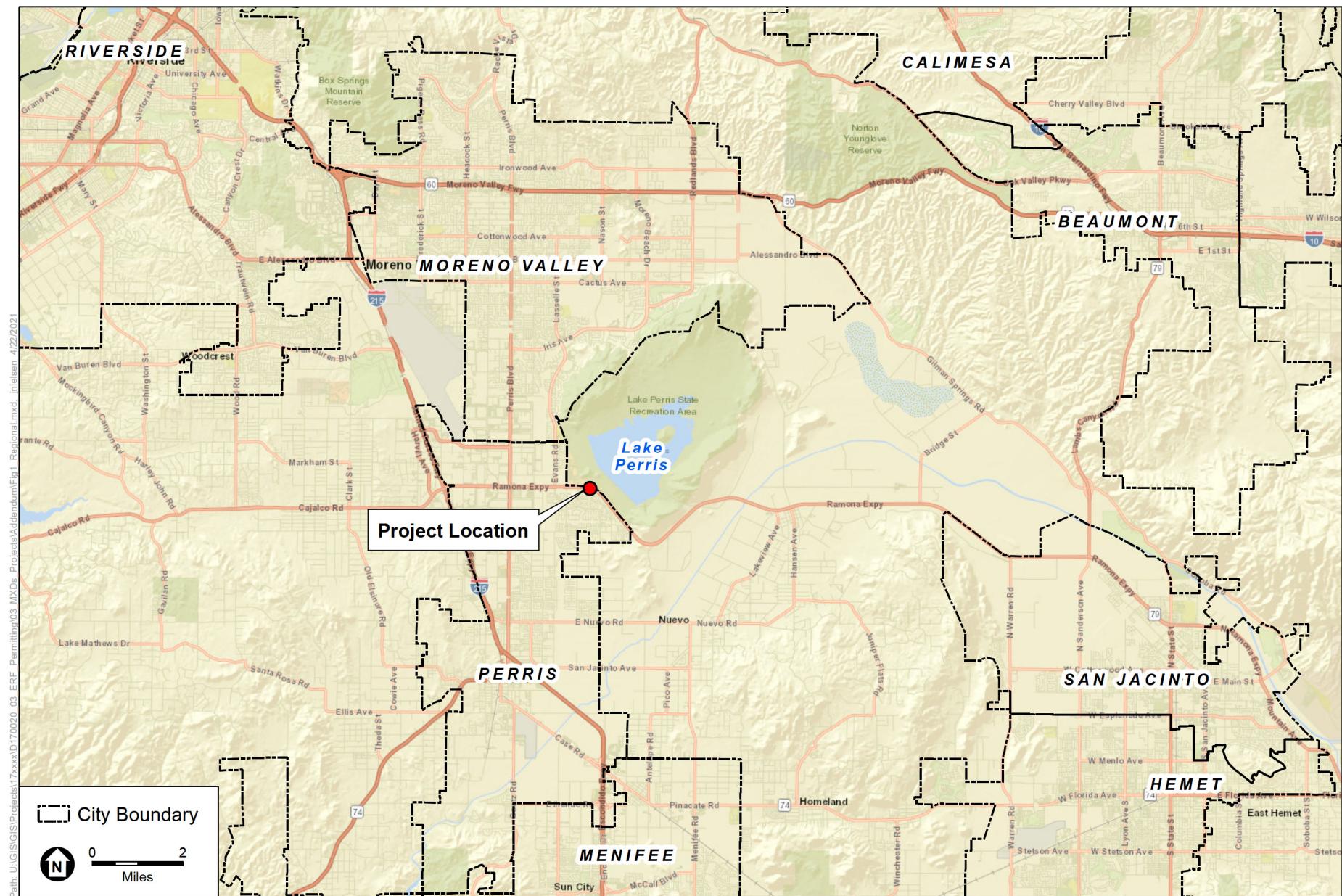
The proposed modifications, as described below in Sections 2 through 8, would not change the impact conclusions of the certified EIR as no new potentially significant impacts would occur, the proposed modifications would not increase the severity of previously-identified impacts analyzed in the certified EIR, and no new mitigation measures are required. DWR has evaluated the environmental impacts of the proposed modifications and, as lead agency, has determined that none of these conditions apply. Therefore, an Addendum to the certified EIR is the appropriate environmental document to analyze the proposed modifications.

2.0 Certified Project Overview

2.1 Project Description

DWR approved implementation of the Project, located in an unincorporated portion of western Riverside County approximately 15 miles south of the City of Riverside and partially within the City of Perris (**Figure 1**). The Project would be constructed partially within the Lake Perris State Recreation Area (SRA), the Lake Perris Fairgrounds, and DWR property north of Ramona Expressway, and would connect to the Perris Valley Channel.

The Project plans to modify the existing emergency release structure and construct a water conveyance facility that would release and convey emergency flows from the Perris Reservoir in the event of an emergency drawdown. The existing bulkhead of the emergency release structure would be removed and replaced with an automated valve(s), which would add flexibility and redundancy to the system and makes the emergency release facility safer to operate. A new drain line (buried pipeline) connecting the de-watering sump of the release structure to an existing collection pipe would be required. This de-watering sump would collect any nuisance water that may collect in the outlet structure. As described in the EIR, the emergency release structure would be designed with a maximum capacity of 3,800 cubic feet per second (cfs) of water, but would be operated in accordance with DWR's *Perris Dam Emergency Release Facility Operations Plan* to not exceed the capacity of the downstream Perris Valley Channel when operationally possible.



SOURCE: ESRI

Perris Dam Emergency Release Facility, Addendum No. 2

Figure 1
Regional Location

The Emergency Release Facility would be constructed in three distinct sections consisting of the SRA Segment, Fairgrounds Segment, and Western Segment. During an emergency release, water would be directed from the emergency release structure to the Perris Valley Channel by a levee system across the open SRA land between the dam and Ramona Expressway (SRA Segment), a channel across the southern end of the Lake Perris Fairgrounds (Fairgrounds Segment), and finally a channel north of Ramona Expressway to the Perris Valley Channel (Western Segment). Upgrades would also be made to the release structure. **Figure 2** illustrates the three distinct conveyance facility segments and release structure upgrades.

SRA Segment

Two levees, the Main Levee and North Training Levee, would be constructed as part of the emergency release conveyance facility within the SRA. The Main Levee would be approximately 6,000 feet long, up to 15 feet high, and up to 115 feet wide at the bottom with 3:1 slopes. The North Training Levee would be approximately 700 feet long, up to 18 feet high and up to 135 feet wide at the bottom with 3:1 slopes.

All levees within the SRA would consist of soil covered by a layer of rock to protect the embankment from erosion during an emergency release. The rock would be overlain by a minimum of two feet of soil and would be revegetated with native grasses and shrubs to replace habitat that was temporarily disturbed during construction. A 20-foot-wide graveled access road would be constructed on top of each levee and at three levee ramp locations for periodic maintenance checks of the levee system.

Fairgrounds Segment

The Fairgrounds Segment would receive water from the drainage basin in the SRA Segment and deliver it to the Western Segment. Water would be conveyed from this segment through an unlined trapezoidal channel approximately 140 feet wide at the top and 100 feet at the bottom with 2:1 side slopes. The channel would be 25 feet deep on the east end and 11 feet deep on the west end.

Within the Fairgrounds Segment, the conveyance channel would cross under two roads: one at the Lake Perris Fairgrounds' eastern entrance at Avalon Parkway (Fair Way) and the other at Lake Perris Drive. Partial or full road closures may be necessary during the construction of both under-crossings. Access to the Lake Perris SRA and the Lake Perris Fairgrounds would be maintained during any such closures via either the Avalon Parkway (Fair Way) entrance or the Lake Perris Drive entrance.

An existing drainage along Ramona Expressway collects runoff from Ramona Expressway and conveys it to the Perris Valley Channel. Once the proposed Project is constructed, the existing drainage would be re-graded as a swale and would continue to collect runoff. The existing drainage channel along the Fairgrounds and Western Segments (see below) would be re-graded and eight new drop inlets would be installed in the existing channel to convey runoff water from the existing channel along Ramona Expressway to the new adjacent ERF channel. In addition, there would be eight drop inlets on the north side of the new channel to convey local runoff into the ERF channel.



SOURCE: Nearmap Imagery 5/7/2020; DWR, ESA.

Perris Dam Emergency Release Facility, Addendum No. 2

Figure 2
Proposed Modification

Western Segment

The Western Segment would be developed as an unlined, earthen, trapezoidal channel. The side slopes would be stabilized with rock for slope protection. The channel would be approximately 2,500 feet long, with a 120-foot top width and 80-foot bottom, and nine feet deep with 2:1 side slopes. A permanent 15-foot access road would be required on both sides of the channel.

The earthen channel would connect the Fairgrounds Segment to the Perris Valley Channel parallel to Ramona Expressway within DWR's existing right-of-way (ROW). Similar to the other two road crossings in the Fairgrounds Segment, this segment would cross under Evans Road through a bridge to be constructed as part of the Project. A control structure at the connection to the Perris Valley Channel would be constructed to control the flow depth within the channel. Either a concrete weir or a series of box culverts and an embankment across the channel would be constructed. In order to accommodate the design flow, prevent scour, and stabilize the banks of the Perris Valley Channel, approximately 5,000 cubic yards of 18-inch or smaller crushed rock would be permanently placed on approximately 229-linear feet along the bottom and slopes of the Perris Valley Channel.

2.2 Public Participation and Proposed Project Approval

Before approval of the Project, the Notice of Preparation and the Notice of Availability of a Draft EIR were posted with the County Clerk in Riverside County, the State Clearinghouse, and two local newspapers (The Press-Enterprise and The Perris Progress/The Perris City News). The documents were also distributed to affected public agencies, community groups, and other interested parties. In addition, one public scoping meeting was held on September 19, 2013, at the Lake Perris Fairgrounds, Harrison Hall, 18700 Lake Perris Drive in Perris, California.

The Draft EIR was circulated for public review from September 9, 2016, through October 24, 2016. During this period, DWR held a public meeting to provide interested persons with an opportunity to comment verbally or in writing on the Draft EIR and the Project. The public meeting was held on September 27, 2016, at the Lake Perris State Recreation Area, Lakeview Pavilion, 17801 Lake Perris Drive in Perris, California.

DWR chose to revise and recirculate some sections of the Draft EIR pursuant to CEQA Guidelines Section 15088.5(c), which states that a Lead Agency need only recirculate the chapters or portions of the EIR to which revisions are limited. These recirculated sections replaced the corresponding sections of the 2016 Draft EIR. All other sections remained unchanged. A Notice of Availability of a Recirculated Draft EIR was posted with the County Clerk in Riverside County, the State Clearinghouse, and two local newspapers (The Press-Enterprise and The Perris Progress/The Perris City News). The documents were also distributed to the same affected public agencies, community groups, and other interested parties as the original Draft EIR. The Recirculated Draft EIR was circulated for public review from September 29, 2017, to November 13, 2017. DWR certified and approved the Final EIR and a Notice of Determination (NOD) for the Project was filed on May 3, 2018.

Addendum No. 1 to the Final EIR, which included minor project footprint changes, a modified access road, a description of the impacts to the Perris Valley Channel, and a connection from an

existing drainage ditch to the proposed channel, was certified and a NOD for the Project was filed September 23, 2020 with the State Clearinghouse, Office of Planning and Research.

3.0 Objectives of the Proposed Project

The proposed modifications maintain the same objectives as listed within the certified EIR for the Project, and are provided below:

- Construct improvements to reduce the risk to public safety and property resulting from the execution of an emergency operation to drawdown Lake Perris;
- Reduce the risk to DWR Operations and Maintenance staff from operating the emergency release structure; and
- Improve the emergency release structure such that it can be reliably operated to drawdown Lake Perris to meet Division of Safety of Dams (DSOD) emergency drawdown requirements.

4.0 Description of Proposed Modifications

The proposed modifications to the Project evaluated in this Addendum include minor modifications to existing Project components. The proposed modifications include the implementation of a groundwater collection system, referred herein as the “channel underdrain,” along the proposed channel and the addition of a coated wire mesh to the levee slopes. In addition, mitigation measure TRANS-1 has been modified and DWR is transferring a parcel to the 46th District Agricultural Association (46th District).

4.1 Channel Underdrain

The design for the Perris ERF channel began in 2018, when Perris Reservoir water levels were lower than current conditions. Groundwater levels within the channel alignment have ranged from 8.5 to 15 feet below the existing ground surface, while the channel bottom is on average 10 feet below the existing ground surface. The groundwater levels cyclically rise and lower downstream of Perris Dam based on several factors, including: the water level within Perris Reservoir; seasonal influences; and groundwater pumping for domestic water use in nearby communities. The groundwater surface downstream of the dam has steadily risen over the past two years due to changes in Perris Reservoir’s water level.

Due to seismic stability concerns, Perris Reservoir was held 25 feet below its design operating capacity from November 2005 to July 2019. After the completion of a seismic remediation Project in 2018, the reservoir was gradually returned to design capacity by mid-2019 resulting in a subsequent rising groundwater surface downstream of the dam. The initial design for the proposed Project was completed prior to the return of Perris Reservoir to design capacity and the current groundwater levels were not anticipated.

Since 2005, monitoring wells have been added along the channel alignment. Well data along the proposed channel alignment indicate there is potential for the depth to groundwater to periodically rise above the bottom of the proposed channel (channel invert) resulting in surface water within the channel. Therefore, the proposed modification includes installation of an

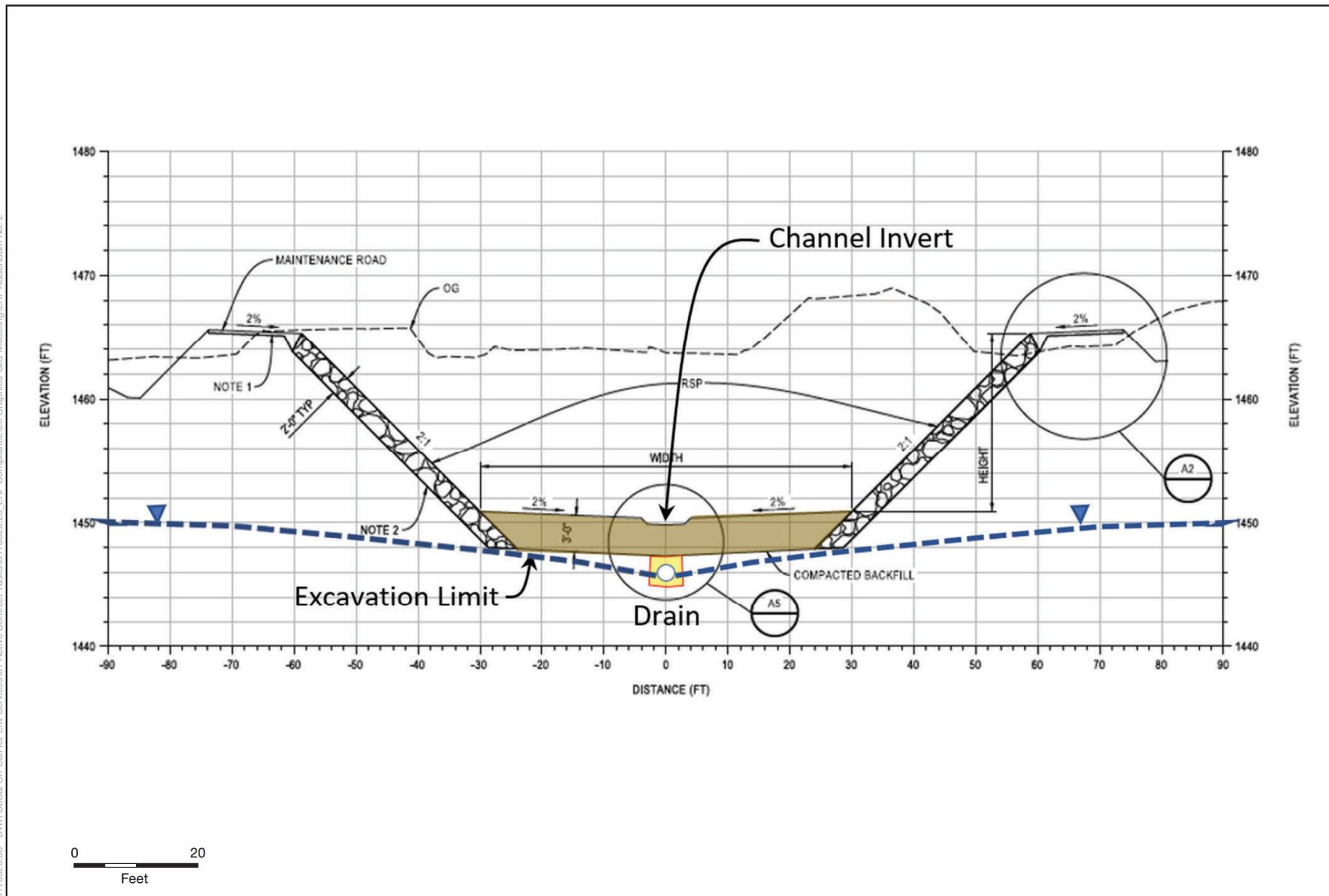
underdrain to be constructed under the centerline of the channel, along the entire channel length (Figure 2). This would constitute a minor design change that would not increase the footprint or capacity of the channel. The purpose of the underdrain would be to prevent groundwater from pooling within the new channel.

The channel underdrain would function by intercepting groundwater as it rises from below the channel bottom. It is not anticipated that groundwater would be collected over the entire length of the channel nor on a continuous basis; rather, groundwater is anticipated to rise high enough to be intercepted only immediately downstream of the two proposed drop structures and only during seasonal periods of high groundwater. The groundwater levels downstream of Perris Dam are typically the highest between April and June. The water collected in the channel underdrain would flow downstream to the west, towards the existing Perris Valley Channel.

The proposed underdrain pipe would be a slotted, 12-inch diameter PVC pipe. The underdrain pipe would be surrounded by crushed rock wrapped in filter fabric. The slotting, crushed rock, and filter fabric would allow groundwater to enter the channel underdrain in locations of high groundwater while simultaneously allowing collected water to flow out of the pipe in locations where the groundwater table is lower. The channel underdrain would be underground for the entire length of the channel except where it connects to the Perris Valley Channel (**Figure 3**). It is anticipated that the majority of collected groundwater would infiltrate back into the ground before it reaches the Perris Valley Channel. In the event that not all the water infiltrates back into the ground, the channel underdrain would terminate at a concrete wingwall in the Perris Valley Channel and would be protected by a flap gate. The flap gate would allow any excess water which has not infiltrated back into the ground to drain into the Perris Valley Channel and also prevent flows within the Perris Valley Channel from entering the channel underdrain. Cleanout locations would be added along the proposed channel to facilitate future maintenance of the channel underdrain.

4.2 Coated Wire Mesh along Levee

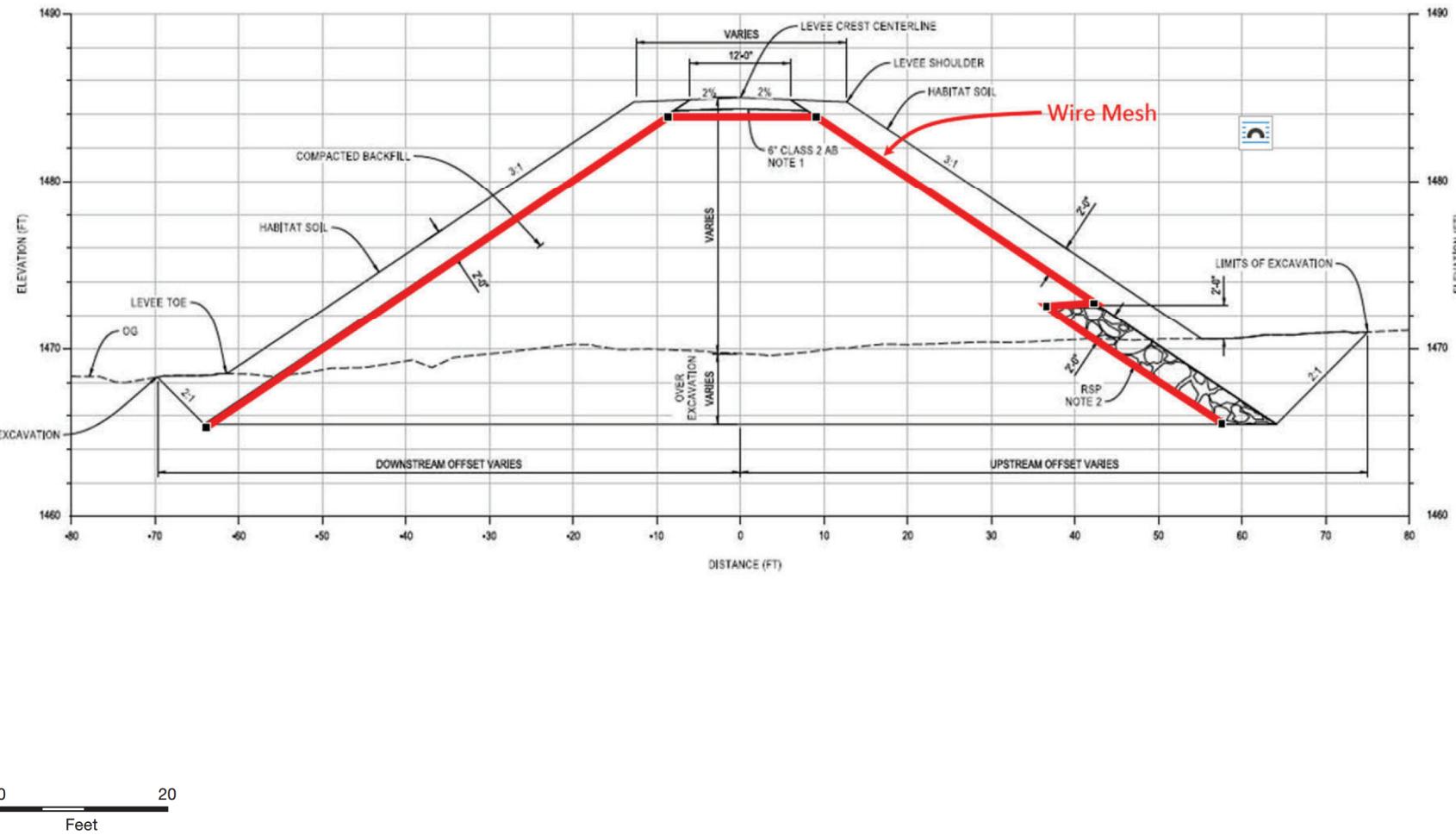
In order to minimize the need for future maintenance of the levee system, DWR would add a PVC-coated steel wire mesh between the habitat soil layer and the compacted fill portions of the levees that would act to protect the levee core's composition. The wire mesh would reduce the need for levee maintenance and repairs. Without the wire mesh, the compacted soil core could be subject to erosion from burrows and roots in the upper layer that could result in levee failure during a flood event. The wire mesh would be added along both sides of the levees and would cover the entire length of both levees. The wire mesh has 0.5-inch by 0.5-inch openings and comes in large rolls of 6 feet by 100 feet. The top 2 feet of habitat soil along the levees would remain the same, loosely compacted and revegetated soil to allow for small mammals to burrow and utilize the levees as habitat (**Figure 4**).



SOURCE: DWR, 2021.

Perris Dam Emergency Release Facility, Addendum No. 2

Figure 3
Proposed Channel Underdrain Conceptual Design



SOURCE: DWR, 2021.

Perris Dam Emergency Release Facility, Addendum No. 2

Figure 4
Proposed Levee Modification with Wire Mesh

4.3 Traffic Detour Mitigation

Mitigation Measure TRANS-1 identifies modifications to seven intersections that would minimize modeled traffic impacts resulting from detoured traffic during the construction of bridges. The Mitigation Measure has been modified due to changes in existing conditions at two intersections (Perris Boulevard/Harley Knox Boulevard and Perris Boulevard/Ramona Expressway), and to clarify that proposed improvements to the intersection at Perris Boulevard and Iris Avenue would only apply under Option B. In addition, in response to feedback received since the certification of the Final EIR, the Mitigation Measure TRANS-1 has been modified to require DWR to coordinate with the affected cities and allow those cities to either approve or disapprove of the proposed measures. The modification to the Mitigation Measure does not alter the conclusions of the certified EIR: impacts to traffic during bridge construction would be significant and unavoidable even with implementation of the mitigation measure.

Mitigation TRANS-1 has been modified as follows:

TRANS-1: For proposed bridge construction at Evans Road (Option A or Option B), DWR shall coordinate with the local jurisdictions, obtain approvals, and implement the following measures for each designated intersection, as approved by local jurisdictions. If local jurisdictions refuse to allow the suggested mitigation actions, the improvements will not be implemented. No other mitigation is available to reduce the project effects.

1. *Perris Boulevard and Iris Avenue (Option B only)*

Create a new northbound right-turn overlap phase; change westbound, northbound, and southbound left-turn phasing to protected-permissive.

2. *Lasselle Street and Iris Avenue*

At all approaches, change left-turn phases to protective-permissive.

3. *Perris Boulevard and Krameria Avenue*

Restripe westbound approach to provide two left-turn lanes and a shared thru-right lane. Change westbound left-turn phase to protective permissive with eastbound phase remaining as permissive.

4. *Lasselle Street and Krameria Avenue*

At all approaches, change left-turn phased to protected-permissive.

7. *Perris Boulevard and Harley Knox Boulevard*

At ~~northbound, southbound, and eastbound~~ approaches, change left-turn phases to protected-permissive.

10. *Perris Boulevard and Ramona Expressway*

~~At all approaches, change left turn phasing to protected permissive. Restripe northwestbound approach lanes to provide two left turn lanes, two thru lanes and one shared to change thru-right lane to dedicated right-turn only lane.~~

11. Redlands Avenue and Ramona Expressway (Option B only)

At southbound and east bound approaches, change left-turn phase to protected-permissive. At northbound and southbound approaches, change right-turn phase to permissive-overlap.

4.4 Parcel Transfer

DWR is acquiring and transferring a parcel along Evans Road, just west of the Lake Perris Fairgrounds, to the 46th District. The property includes approximately 4.54 acres of graded, unvegetated former agricultural land and is known as the DiMatteo Property (Figure 2). The proposed project modification includes only the transfer of jurisdiction of the parcel between state agencies. Per personal communication between DWR and the 46th District, this parcel has been used in the past for overflow parking during Lake Perris Fairgrounds events. The parcel may be used by the 46th District for overflow parking consistent with existing use. Therefore, this modification would not result in any environmental impacts and no further analysis is required.

5.0 Proposed Modification Construction

5.1 Schedule

The duration of construction work for the entire proposed Project is approximately 2.5 years. Construction of the proposed modifications would occur during the 2.5-year construction period and would take approximately 3 to 6 months for each component. Project construction is anticipated to begin in early 2022.

5.2 Proposed Channel Underdrain

The channel underdrain pipe would be installed in 20-foot-long sections. A trench would be excavated along the center of the channel. The channel underdrain pipe would be placed along with rock and filter fabric in the trench. The pipe depth would vary, but the centerline of the pipe would be between 1.5 and 4 feet below the channel bottom. Construction of the channel underdrain would require three construction workers daily.

Materials such as pipe, crushed rock, and filter fabric would be imported to the site. Staging for proposed construction materials would be determined by the contractor, but would be contained to areas previously designated as staging areas in the certified EIR or delineated as construction impact areas. Approximately two-hundred and fifty 20-foot-long sections of pipe would be required for the channel underdrain. A total of approximately 5 truck trips would be required to transport the perforated pipe and associated materials to the Project site. In addition, a total of approximately 65 to 80 truck trips would be required to deliver approximately 1,300 cubic yards of crushed gravel from local quarries during construction. These quarries would be located in close proximity to the Project site, within approximately 10 miles. In addition to accommodate movement of material on site during construction, use of the existing road at the base of the dam has been added to the haul route in order to allow for flexibility of usage of roads below the dam as shown on **Figure 5**.



SOURCE: Nearmap Imagery, 5/7/2020; DWR; ESRI

Perris Dam Emergency Release Facility, Addendum No. 2

Figure 5
Proposed Modification Haul Route

5.3 Coated Wire Mesh along Proposed Levees

Approximately 1,580 rolls of coated wire mesh would be required to cover the levee embankment. The wire mesh would be installed using a spreader bar assembly attached to a front-end loader, backhoe or excavator bucket. The wire mesh would be secured by sandbags initially. Rolls would be overlapped a minimum of eight inches and connected by steel C-ring staples. Twelve-inch-long pins would be used to secure the wire mesh to the embankment. Construction of the wire mesh would require six to eight construction workers daily. Approximately 13 to 16 truck trips would be required to import materials to the proposed Project site for the levee wire mesh installation. Once installed, the wire mesh would be covered with two feet of topsoil to support revegetation and allow for small mammal re-occupation.

5.4 Traffic Detour Mitigation

The revisions to Mitigation Measure TRANS-1 would not affect construction or schedule.

5.5 Parcel Transfer

The parcel transfer would not affect construction or schedule.

6.0 Proposed Modification Operations

Operation of the proposed Project would remain the same as described in the certified EIR. Operation would include period checks of the channel underdrain flap gate at the Perris Valley Channel connection to ensure it is working properly and to clear sediment buildup from the cleanouts along the channel. As outlined in the certified EIR, DWR will prepare an Operations and Maintenance Manual and will enter into an agreement with the Riverside County Flood Control and Water Conservation District (District) for the joint use of the channel as an emergency release facility and stormwater runoff channel. The District's routine maintenance activities within the channel would occur annually and on an as-needed basis. These activities generally include removal of trash, sand, silt, sediment, debris, woody and herbaceous vegetation and other obstructions to flow, the control of weeds, grasses and emergent vegetation and the repair due to storm flow damage, cleaning and clearing of the constructed channel. Vegetation control will be accomplished by mowing, hand labor, or herbicide application. All other maintenance activities on the Channel resulting from DWR's release of waters or any other major structural repairs on the Channel will be performed by DWR.

The completed levees will be maintained by DWR and the wire mesh in the levees would not require any maintenance. No additional staff would be required to operate or maintain the proposed channel underdrain and wire mesh along the proposed levees. The revisions to Mitigation Measure TRANS-1 would not affect operations of the facilities.

7.0 Environmental Setting and Analysis

The proposed modifications would not change the regulatory framework, impact discussion, mitigation measures, or significance conclusions for the following topic areas, as described in the certified EIR: Aesthetics; Energy; Hazards and Hazardous Materials; Land Use; Geology, Soils

and Mineral Resources; and Public Services. Therefore, these topic areas are not analyzed in this Addendum.

7.1 Air Quality/Greenhouse Gas Emissions

The certified EIR evaluated impacts to air quality from construction and operation and determined that impacts associated with air quality would be less than significant with implementation of mitigation measures. The certified EIR evaluated impacts to greenhouse gas (GHG) emissions from construction and operation and determined that impacts associated with GHG emissions would be less than significant and no mitigation measures are required. This section provides analysis of the potential air quality and GHG impacts associated with the proposed modifications.

Impact Discussion

The construction of the proposed modifications would not require additional workers or heavy equipment beyond those assumed in the air quality and GHG modeling analysis in the certified EIR. The air quality modeling assumptions in the certified EIR evaluated maximum daily emissions for operation of the full inventory of construction equipment associated with each construction phase. Similarly, the GHG modeling assumptions in the certified EIR evaluated annual GHG emissions for the total construction activities, based on the maximum daily assumptions used for air quality. The number of required workers and heavy equipment for the proposed modifications would be within the number of workers and types of heavy equipment assumed in the modeling in the certified EIR. The construction of the proposed channel underdrain and wire mesh would require a total of up to approximately 101 truck round trips for material transportation occurring over a 3 to 6-month construction window, which results in approximately 1 to 2 truck round trips on an average day (i.e., 2 to 4 one-way truck trips with 1 to 2 inbound and 1 to 2 outbound truck trips). Thus, the proposed modifications would require a small number of additional truck trips during the 3 to 6-month construction window, which are accommodated within the modeling assumptions in the certified EIR, which included a conservative estimate of over 17,800 total truck round trips during an approximately 2.5-year construction period. Similar to the certified EIR, implementation of Mitigation Measures AQ-1 and AQ-2 would ensure that air quality impacts from the proposed modifications would be mitigated to less than significant levels. The mitigation measures assign a maximum amount of truck trips per day transporting rock material from the Perris Dam quarry in the Bernasconi Hills to the staging area below the Perris Dam and require appropriate EPA Tier 4 engines or their equivalent for construction equipment and vehicles greater than 50 horsepower. The overall construction period for the proposed Project would remain the same with the proposed modifications, which is anticipated to occur over an approximately 2.5-year period. Therefore, the maximum annual and total GHG emissions during the construction period would be the same as disclosed in the certified EIR. Similar to the certified EIR, GHG emission impacts from the proposed modifications would be less than significant. Once constructed, the proposed modification would result in no changes to operational activities as described in the certified EIR. Therefore, operational air quality and GHG emission impacts would be the same as in the certified EIR.

Conclusion

The proposed modifications would not create additional air quality or GHG emission impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.2 Biological Resources

The certified EIR evaluated impacts to biological resources and concluded that impacts to special status plant and wildlife species, and associated habitat conservation plans, would be considered less than significant with mitigation. This section provides analysis of potential biological resources impacts associated with the proposed modifications.

Impact Discussion

The proposed modifications would be located within areas that were surveyed in the certified EIR, Addendum No. 1, and/or within areas that have been previously disturbed and have little to no habitat value for special-status species. Implementation of the proposed wire mesh would not impact small mammal use of the levees within the State Recreation Area. As described in the certified EIR, the extra two feet of loosely compacted dirt (habitat soil) above the main levee core and compacted soil would remain the same. The new wire mesh would be placed along the entire levee system over the already densely compacted levee cores. Small mammals found in the State Recreation Area primarily include Los Angeles Pocket Mice (LAPM) and could include Stephens' Kangaroo Rats (SKR), as the Project is located within a core reserve of the SKR Habitat Conservation Plan. As discussed on page 10 of the SKR Recovery Plan (1997), SKR burrows are often as deep as 18 inches and depth of soil cover in occupied habitat is generally at least 20 inches. In addition, there is no evidence to indicate that LAPM would burrow deeper than a few inches of dirt and are not anticipated to reach the newly proposed wire mesh. The wire mesh would be placed below the habitat soil and above the compacted levee core. As such, the proposed modifications would not present any new impacts to sensitive biological resources. The amount of habitat temporarily affected would not change and the proposed modifications would not conflict with the provisions of a habitat conservation plan, such as the Western Riverside County Multiple Species Habitat Conservation Plan or the SKR Habitat Conservation Plan, for the same reasons as described the certified EIR. No additional biological impacts would occur by the addition of the channel underdrain along the proposed channel, as it is a minor modification of the proposed channel's original design. All potential impacts associated with the proposed modifications would be mitigated to less than significant levels with the implementation of Mitigation Measures BIO-1 through BIO-7 as described in the certified EIR. As such, potential impacts associated with the proposed modifications would remain less than significant with mitigation.

Once constructed, the Riverside County Flood Control District will maintain the new channel including trash removal and weed abatement measures, in compliance with the agreement between the County and DWR.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.3 Cultural Resources

The certified EIR evaluated impacts to cultural resources and concluded that impacts would be considered less than significant with mitigation. This section provides analysis of potential cultural resources impacts associated with the proposed modifications.

Impact Discussion

The proposed modifications would be conducted within areas surveyed as part of the analysis in the certified EIR and Addendum No. 1. The addition of the wire mesh along the levee system would not result in any cultural resources impacts. The channel underdrain would be constructed along the channel construction area which included analysis related to excavation within the Fairgrounds and Western Segments of the proposed Project. No archaeological resources were identified within the proposed Project modification areas. Although no archaeological resources were identified, as noted in the certified EIR, activities involving ground disturbance could result in the discovery of previously unknown subsurface archaeological deposits that could qualify as historical resources or unique archaeological resources pursuant to CEQA, as well as human remains interred outside of formal cemeteries. If discovered, implementation of the certified EIR's Mitigation Measures CUL-1, CUL-2, CUL-3 and CUL- 5 would reduce potential impacts to archaeological resources and human remains to a less than significant level.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.4 Hydrology and Water Quality

The certified EIR evaluated impacts to hydrology and water quality and concluded that impacts would be considered less than significant. This section provides analysis of potential hydrology and water quality impacts associated with the proposed modifications.

Impact Discussion

The proposed channel underdrain would allow for the collection of groundwater along the proposed channel to be conveyed to the Perris Valley Channel. Implementation of the channel underdrain would ensure that the depth to groundwater does not become higher than the channel bottom during periods of high groundwater, which would result in surface water in the channel. Construction activities associated with the proposed channel underdrain would be subject to the Project's Storm Water Pollution Prevention Plan (SWPPP). Through the implementation of the

Project's SWPPP and standard water quality design specifications, which include the incorporation of best management practices (BMPs), the proposed channel underdrain would not result in significant impacts to water quality or groundwater recharge.

The channel underdrain would function by intercepting groundwater as it rises from below the channel bottom. It is not anticipated that groundwater would be collected over the entire length of the channel nor on a continuous basis; rather, groundwater is anticipated to rise high enough to be intercepted only immediately downstream of the two proposed drop structures and only during seasonal periods of high groundwater. The groundwater levels downstream of Perris Dam are typically the highest between April and June. The water collected in the channel underdrain would flow downstream to the west, towards the existing Perris Valley Channel. Other groundwater users would not be affected as a result of the water draining towards the Perris Valley Channel. None of the local municipal supply wells in the area would experience water level impacts. Furthermore, the groundwater flow direction is toward the west and south. The effect of dewatering a small volume that would otherwise pond in the channel bottom would not affect beneficial uses of groundwater or impair access to water supplies down gradient.

As described above, the proposed channel underdrain would intercept groundwater as it rises from below the channel bottom in order to avoid pooling of water within the ERF channel during seasonal periods of high groundwater, generally during the months of April through June.

Groundwater intercepted by the underdrain system is primarily anticipated to reabsorb into the soil further downstream, and to only reach the Perris Valley Channel during periods of seasonally high groundwater (April through June.) During these periods, approximately 0.2 cfs of water could be flowing from the channel underdrain into the Perris Valley Channel. The potential flow rate into the Perris Valley Channel constitutes less than a fraction of a percent of the channel's design capacity of 16,000 cfs north of Ramona Expressway. The modifications to the proposed Project would not increase the volume of surface runoff from the certified EIR conditions.

Operation of the proposed channel underdrain would not adversely impact water quality or recharge. The proposed channel underdrain would only collect groundwater during periods of high groundwater, expected to be April to June. The proposed channel underdrain would be designed with a flapgate to allow water to exit into the Perris Valley Channel, but prevent flows from the Perris Valley Channel from entering the emergency release facility channel. Cleanouts would be added along the proposed channel to facilitate maintenance of the channel underdrain. As a result, operation and maintenance of the proposed channel underdrain would not adversely impact water quality or recharge.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.5 Noise

The certified EIR evaluated impacts to noise and vibration and concluded that impacts to nearby sensitive receptors and open space recreational areas would be considered significant and unavoidable during construction. This section provides analysis of potential noise impacts associated with the proposed modifications.

Impact Discussion

The construction of the proposed modifications would not change the duration of the proposed construction activities that use heavy equipment during site preparation, grading, excavation, and building activities. As shown on Figure 2, the proposed Project modification's impact areas are within the Project footprint as described in Addendum No. 1 to the certified EIR. The proposed modifications would use the same or very similar types of construction equipment and vehicles as was assumed in the modeling for the certified EIR. In addition, the distance to nearby sensitive receptors would remain the same; therefore, similar to the certified EIR, impacts would be considered significant and unavoidable during construction even with implementation of the certified EIR Mitigation Measures NOISE-1 through NOISE-4.

There would be no operational requirements for the wire mesh along the levee systems. As stated on Page 3.1-9 of the certified EIR, prior to construction, DWR would enter into an agreement with the Riverside County Flood Control District for the joint use of the facility as an emergency release facility and stormwater runoff channel, or develop an operation and maintenance plan for the channel, in order to ensure trash and debris does not accumulate within the channel. Operation of the channel underdrain would require periodic checks of the cleanout locations along the channel similar to the trash and debris check and cleanout. Both activities would be conducted simultaneously and no additional operational needs for the proposed modifications would be required. Impacts are considered less than significant during operation.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.6 Recreation

The certified EIR evaluated impacts to recreation and concluded that potential impacts to recreational facilities would be considered less than significant. This section provides analysis of potential recreation impacts associated with the proposed modifications.

Impact Discussion

The proposed modifications would not create additional impacts beyond those described in the certified EIR. The proposed modifications would not expand the construction footprint and Project impact areas or increase the construction duration; therefore, the modifications would not result in additional impacts to recreational facilities beyond those discussed in the certified EIR.

As shown on Figure 2, the wire mesh would be located along the proposed levee impact area and would be entirely underground once constructed, and the channel underdrain would be located along the Fairgrounds and Western Segments inside and below the previously proposed channel. Once constructed, the proposed modifications would not include additional recreational impacts or result in new recreational facilities.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP.

7.7 Transportation and Traffic

The certified EIR evaluated impacts to traffic and circulation and concluded that potential impacts would be considered significant and unavoidable even with implementation of mitigation. This section provides analysis of potential traffic and circulation impacts associated with the proposed modifications.

Impact Discussion

Addendum No. 1 to the certified EIR reduced impacts to traffic and circulation by modifying the haul route to avoid Ramona Expressway. The proposed haul route changes analyzed in Addendum No. 1 would allow for the haul route to be used for emergency access, on an as needed basis as required by Mitigation Measure UTIL-1. The proposed modifications' construction activities would use the same haul routes as described for the proposed Project, as well as the new haul route changes proposed to by the modifications to include the road along the base of the dam.

The construction of the proposed channel underdrain and wire mesh would require the addition of approximately 101 truck round trips for material transportation. The addition of approximately 101 total truck round trips over the 3 to 6-month construction window for the proposed modifications would be small in relation to the Project's total truck trips over the approximately 2.5-year construction period, which included a conservative estimate of over 17,800 total truck round trips during construction. Construction of the proposed modifications would not require additional road closures and implementation of a Traffic Management Plan and Mitigation Measure TRANS-1 would still be required. Impacts to the Project area would continue to be significant and unavoidable during construction.

After the proposed modifications are implemented, the proposed Project may require minor maintenance activities, similar to maintenance activities already required for the proposed channel. Maintenance activities would not significantly contribute to local traffic or circulation in the Project area. No additional impacts to traffic or circulation would occur as a result of the Project modifications.

Mitigation Measure TRANS-1 is being modified to clarify that the recommended improvements at the intersection of Perris Boulevard and Iris Avenue would only be required for Option B,

consistent with *Traffic Study for the California Department of Water Resources Lake Perris Emergency Release Facility Project* included as Appendix F of the Draft EIR (also attached to this Addendum as Attachment 1 for reference). This modification would not change the effectiveness of the mitigation measure or alter the significance of the impact. Rather, this modification corrects an error in the Final EIR, clarifying that the mitigation measure is consistent with the Traffic Report.

Further, the modification of Mitigation Measure TRANS-1 to include initial coordination with local jurisdictions clarifies that implementation of the improvements is dependent on approval by the local cities. DWR will not be able to implement mitigation actions unless local jurisdictions approve DWR's request to do so. As a result, the modifications to the Mitigation Measure clarifies that DWR will coordinate with local jurisdictions prior to implementation of the mitigation, but if local jurisdictions refuse to allow the suggested mitigation actions within their jurisdiction, DWR will be unable to implement the improvements. No further mitigation is available that would reduce the project effects. Therefore, the significance of project impacts as described on Page 3.14-27 of the certified EIR would remain significant and unavoidable.

Conclusion

The proposed modifications would not create additional impacts beyond those described within the certified EIR, and would not substantially increase the severity of impacts previously analyzed in the certified EIR. No new mitigation is required beyond the existing commitments contained within the MMRP as modified.

8.0 Summary of Effects

The proposed modifications would not change the impact conclusions of the certified EIR. The proposed modifications would still meet the same Project objectives identified in the certified EIR. No new potentially significant impacts would occur, and the proposed modifications would not increase the severity of previously-identified impacts analyzed in the certified EIR. Therefore, the proposed modifications to the previously-approved Project do not meet any of the conditions that would require the preparation of a subsequent EIR or negative declaration pursuant to section 15162 of the CEQA Guidelines or any of the conditions set forth in section 15163 of the CEQA Guidelines.

DWR has evaluated the environmental impacts of the proposed modifications and, as the lead agency, has determined that none of the conditions requiring a Subsequent EIR apply. Therefore, an Addendum to the certified EIR is the appropriate environmental document to address the proposed modifications and approve their implementation.