INITIAL STUDY
AND
MITIGATED NEGATIVE DECLARATION
OF ENVIRONMENTAL IMPACT

DRY CREEK HABITAT ENHANCEMENT DEMONSTRATION PROJECT

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PROJECT TITLE

This Initial Study and Mitigated Negative Declaration has been prepared by the Sonoma County Water Agency (Water Agency) for the **Dry Creek Habitat Enhancement Demonstration Project.**

INTRODUCTION

The Water Agency is the lead agency in accordance with the California Environmental Quality Act (CEQA) for the proposed project. An Initial Study is a preliminary analysis of a project's potential environmental impacts used to determine whether a Negative Declaration or an Environmental Impact Report will be prepared. This document is intended to provide a clear understanding of the environmental impacts associated with the construction and operation of the proposed project for decision-makers, responsible and trustee agencies under CEQA, and the public. If an Initial Study identifies potentially significant impacts but the project is modified or revised to clearly mitigate the impacts, a Mitigated Negative Declaration may be prepared. If an Initial Study concludes that a project may have a significant effect on the environment, an Environmental Impact Report should be prepared.

PROJECT LOCATION

The project site is within the Dry Creek channel and on private properties in an unincorporated area of Sonoma County, California (see Figure 1). The project sites are located in and along Dry Creek from approximately ½ mile upstream of Lambert Bridge to ½ mile downstream of Lambert Bridge.

PROJECT BACKGROUND

The Water Agency was created in 1949 by the California Legislature as a special district to provide flood protection and water supply services. The Sonoma County Board of Supervisors acts as the Water Agency's Board of Directors. The Water Agency's powers and duties, as authorized by the California Legislature, include the production and supply of surface water and groundwater for beneficial uses, control of flood waters, generation of electricity, providing recreational facilities (in connection with the Water Agency's facilities), and the treatment and disposal of wastewater.

From its outlet in Warm Springs Dam, Dry Creek meanders 14 miles to the Russian River. The creek is home to endangered coho salmon and threatened Chinook salmon and steelhead (including steelhead raised at the Don Clausen Fish Hatchery). The creek also serves as a conduit for water that is released from Lake Sonoma by the U.S. Army Corps of Engineers in the winter for flood control purposes and by the Water Agency in the summer for water supply.

The National Marine Fisheries Service (NMFS) issued the *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian*

River Watershed (Russian River Biological Opinion) on September 24, 2008. NMFS' Russian River Biological Opinion is a culmination of more than a decade of consultation between the Water Agency, the U.S. Army Corps of Engineers (Corps), and the NMFS regarding the impact of the Water Agency's and Corps' water supply and flood control activities on three fish species listed under the federal Endangered Species Act: Central California Coast steelhead, Central California Coast coho salmon, and California Coastal Chinook salmon. The California Department of Fish and Game (CDFG) issued a consistency determination on November 9, 2009, finding that the Russian River Biological Opinion was consistent with the requirements of the California Endangered Species Act (CESA) and adopted the measures identified in the Russian River Biological Opinion.

NMFS concluded in the Russian River Biological Opinion that the continued operations of Coyote Valley Dam and Warm Springs Dam by the U.S. Army Corps of Engineers and the Water Agency in a manner similar to recent historic practices, together with the Water Agency's stream channel maintenance activities and estuary management, are likely to jeopardize and adversely modify critical habitat for endangered coho salmon and threatened steelhead.

NMFS' Russian River Biological Opinion found that summer flows in the upper Russian River and Dry Creek are too high for optimal juvenile coho salmon and steelhead habitat. Current summer flows in the creek range from 105 to 175 cubic feet per second (cfs). The velocities associated with these summer flows make it difficult for the juvenile fish to thrive. NMFS' Russian River Biological Opinion recognizes that large reductions in the summertime flows in Dry Creek would impair the Water Agency's ability to deliver water to its customers. Therefore, the Russian River Biological Opinion requires habitat enhancement of six miles of Dry Creek to improve summer rearing conditions for coho salmon and steelhead while allowing the Water Agency to maintain the existing flow range in Dry Creek of 105 to 175 cfs for water supply purposes. The six miles of habitat enhancement are to be distributed over the entire length of Dry Creek below Warm Springs Dam and implemented at a minimum of eight locations on the creek. It is intended that the enhancements for summer rearing will also provide winter rearing and refugia habitat. The habitat enhancements are to be implemented in phases to allow for evaluation of their effectiveness as the effort progresses.

One of the Water Agency's first steps toward meeting the requirements of NMFS' Russian River Biological Opinion is to conduct a habitat enhancement feasibility study on Dry Creek. This study, being conducted for the Water Agency by Inter-Fluve, an environmental engineering firm specializing in the sustainable design and construction of river habitat restoration projects, will determine which areas of Dry Creek are candidates for habitat enhancement and will evaluate the feasibility of designing projects that provide habitat enhancement while also accommodating high summertime flows. Inter-Fluve has prepared a Dry Creek Current Conditions Inventory Report (December, 2010) in which they identify numerous promising areas for habitat enhancement along Dry Creek.

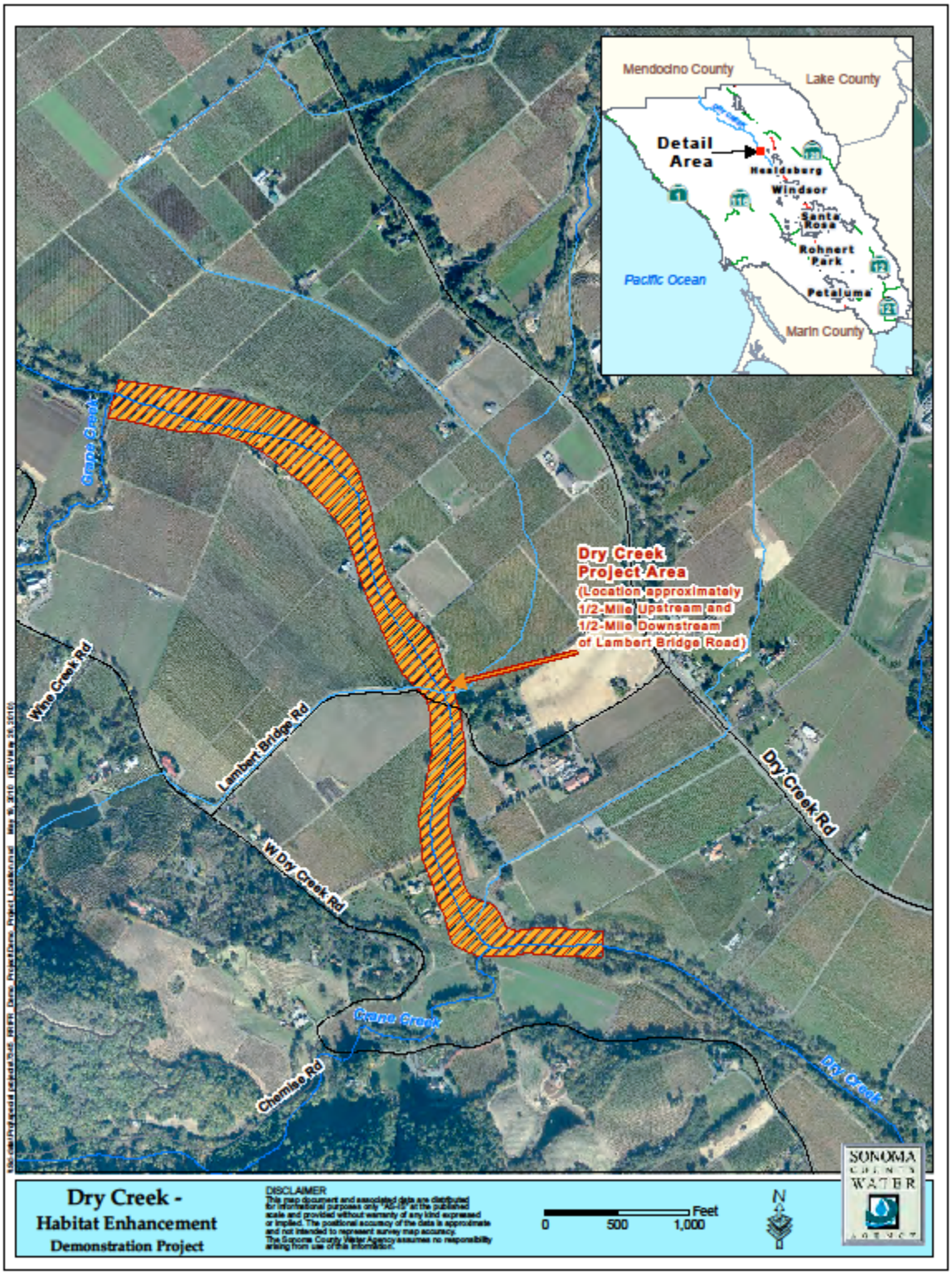


FIGURE 1. PROJECT LOCATION

PROJECT PURPOSE AND NEED

The Dry Creek Habitat Enhancement Demonstration Project (Project) would implement habitat enhancement projects within a one mile reach of Dry Creek, which contains several areas of interest identified by Inter-Fluve. The purpose of the project is to demonstrate to regulators, landowners, and local decision makers the feasibility of Dry Creek habitat enhancements on a smaller scale and, in particular, to determine how they could be constructed, what they may ultimately look like, and how effective they are before implementing the full six miles of habitat enhancements on Dry Creek.

PROJECT DESCRIPTION

The project area is located within the Dry Creek Valley and would be visible from Lambert Bridge Road which crosses through the middle of the project area. Portions of the project area may also be visible from Dry Creek Road and West Dry Creek Road. Project activities would consist of actions such as dewatering and bypass flow pumping, stockpiling of materials, removal of vegetation, excavation of the backwater/alcove areas, and placement of boulder and log structures. These construction activities would be clearly visible from Lambert Bridge Road. Some of the construction activities may also be visible from Dry Creek Road and West Dry Creek Road in the project area.

Construction in or near the streambed would occur during the months of June through October during summer low-flows. Construction is scheduled to occur during the summer and fall of 2012. Because the available construction window is limited to the June through October period, construction activities may need to be halted in October 2012 and resumed the following summer in 2013. All flows in Dry Creek (approximately 100 to 120 cfs) would need to be diverted around the work area during construction. Work areas would be isolated from the moving stream using some type of imported barrier or material (water filled bladders, gravel cofferdams, sheetpile cofferdams, etc.). Typically, the work area would be isolated and the creek flow would be allowed to continue flowing adjacent to the isolated work area. In some cases it may be necessary to completely isolate the creek from bank to bank. In this case, bypass pumping from the upstream end of the work area to the downstream end of the work area would occur to bypass creek flows around the work area. The bypass pumping would result in the work area being dewatered during construction. Dewatering would require installation of cofferdams upstream and downstream of the project site and diverting stream flow around the project site.

Enhancements in the Project area will emphasize natural stream characteristics, or geomorphology, which refers to the manner in which water and sediment combine to create habitat features friendly to fish. By using enhancement practices that emulate natural geomorphic conditions, the benefits provided to young coho and steelhead and their longevity are optimized. The proposed Project would consist of the following enhancement practices, which are described below: streambank

stabilization; backwater channels, alcoves, and ponds; side channels; log jams; pool enhancement; riffle construction; and riparian vegetation management.

Streambank Stabilization (Figures 13 and 14): This enhancement practice is applied in areas of bank erosion to retain property and to enhance the habitat characteristics along the edge of the stream. Two similar, yet slightly different, approaches are proposed in Dry Creek, depending upon streambank height:

1. For low streambanks (less than six to seven feet tall), eroding materials would be excavated and the streambank rebuilt with a combination of logs, boulders, cobbles and soil. The area would then planted with native riparian vegetation.
2. For high streambanks (greater than seven feet tall), the base of the streambank would be rebuilt in a manner similar to the low streambank method described above. The upper part of the streambank would also be rebuilt with a technique that encapsulates soil in strong fabric blankets made from coconut fiber. Native plants are planted right through the fabric. After three to five years, the blankets would decompose and the native vegetation would take over the role of stabilizing the upper part of the streambank.

For streambanks in areas where the erosive forces are projected to be less severe, or where space allows, the streambank may be re-graded to a flatter, more stable bank angle. The re-graded bank would then be treated by coverage with biodegradable erosion control fabrics for near-term erosion protection, and native revegetation for long-term protection.

Backwater Channels, Alcoves, and Ponds (Figures 15 and 16): This enhancement practice consists of areas off to the side of the stream that in summer connect to the mainstem of Dry Creek only at their downstream end. During this time, water backs into these areas and has a very low or no current. In addition to still waters, logs that protrude into or float on the water, in combination with floating and submerged vegetation, and surrounding tall vegetation make these areas very attractive to young fish, particularly coho salmon. They use these areas to search for food, rest, and avoid predators. During winter periods, these backwater areas would continue to have quiet water despite having occasional flow moving through them. In Dry Creek, this type of habitat would be primarily constructed in wider areas of the creek. Construction of these areas would include excavation to form the channel, pool or ponds, and include placement of logs at appropriate locations, planting of aquatic vegetation and management of surrounding vegetation.

Side Channels (Figure 17): Side channels run parallel to the main stream and connect to the main stream at both upstream and downstream ends, even during the summer. The flow of the stream is split between the two channels. This serves to reduce the stream current, which in combination with pools and logs in the water, make these areas attractive to coho salmon and steelhead trout. The fish use these areas to search for food, rest and to avoid predators. In Dry Creek, this type of habitat would also be primarily constructed in wider areas of the creek. In some of these areas, old abandoned channels may be excavated to provide enhanced side channels.

Construction of these areas would entail excavation to form the channel and pools, placement of logs at appropriate locations, and management of the surrounding vegetation.

Log Jams (Figure 18): A log jam is an accumulation of logs that may be constructed in an area where it would be beneficial to provide velocity refuge for fish and/or to initiate or stabilize a turn or fork in the channel. The log jam creates eddies (circulating currents) as the water flows around the logs. These eddies provide resting areas for fish instead of having to fight continuously against the current. The log jam also serves to anchor the stream's location by being an immobile object along one or both banks, acting similar to a bridge abutment or a natural bedrock outcrop. Deep pools may form next to log jams through the interaction of the logs and flowing water, creating excellent fish habitat. To create a log jam, an area is excavated and then logs are stacked and anchored by boulders and "snags" (trunks of dead trees that remain standing vertical to the horizon). This combination stabilizes the log jam during floods.

Pool Enhancements (Figure 19): Pools are deeper areas of the stream. In a healthy stream, pools provide key habitat for young fish because currents are slow, the flow patterns are diverse, and fish can hide beneath logs that project into the water. Pool enhancement in Dry Creek will act to increase the variety of habitat for young fish, and create areas that have sheltered currents that young fish prefer. This would be accomplished through selective grading of existing pool features and the installation of logs in the water.

Riffle Construction (Figure 20): Riffles are areas where the streambed is steeper and the current is swift. Riffles play a key role in controlling the elevation of the streambed and releasing the stream's energy to slow the current flowing through adjoining pools. Much of the food produced in a stream comes from these places. Construction of riffles in Dry Creek will improve the quality of the adjoining pools for fish and stabilize the stream bed while providing the fish with a wider variety of things to eat. Riffles are constructed by building mounds of small boulders, cobbles, gravel, and sand across the stream.

Riparian Vegetation Management: Dry Creek has extensive vegetative growth along the channel, which includes many non-native or invasive weed species. In some areas, overly dense stands of vegetation impair stream function by channelizing the flow of the creek and acting like a levee, which forces energy into the creek bed, and results in pools that are too long, with water that moves too swiftly. Riparian vegetation management would include selective thinning of existing vegetation, removal of invasive weeds, and in some cases, replanting of native vegetation.

Monitoring and Maintenance: The Water Agency would be responsible for monitoring and maintaining the project components throughout the expected lifespan of the proposed structures (15-25 years). Monitoring activities could consist of activities such as fish surveys, stream profile and cross-section measurements, vegetation surveys,

wildlife surveys, and photo documentation of structures. Failing structures, or structures that aren't performing as intended (not inundated properly, inundated too much, buried, having too high of velocities still) may require additional maintenance work in future years after the initial construction to restore or enhance the originally intended functions. Vegetation management is expected to occur annually for the first few years after implementation and then on a three- to five-year recurring basis in order to maintain the desired vegetation species and densities in the project area.

The Demonstration Reach

The 1.1 mile demonstration reach is located in the middle of the Dry Creek Valley, extending from the mouth of Grape Creek downstream to the mouth of Crane Creek. The landowners along this stretch of the creek have partnered with the Water Agency to begin planning the first phase of habitat enhancement on Dry Creek.

Implementation of habitat enhancement in this reach is an important first step in the longer-term process of improving habitat conditions in Dry Creek. The Dry Creek Habitat Enhancement Demonstration Project provides an opportunity to improve habitat while also showcasing a range of fish habitat enhancement approaches that may be used elsewhere in Dry Creek over the next decade. Construction of the demonstration project is scheduled to begin in 2012. Figures 2 through 12 show the general project area and the proposed habitat enhancements proposed for the project area. Figures 13 through 20 show graphical representations of the various habitat enhancement methods proposed. A more detailed description of the proposed project components is included in Appendix D, the Draft 60% Complete Design Report for the Dry Creek Habitat Enhancement Demonstration Project.

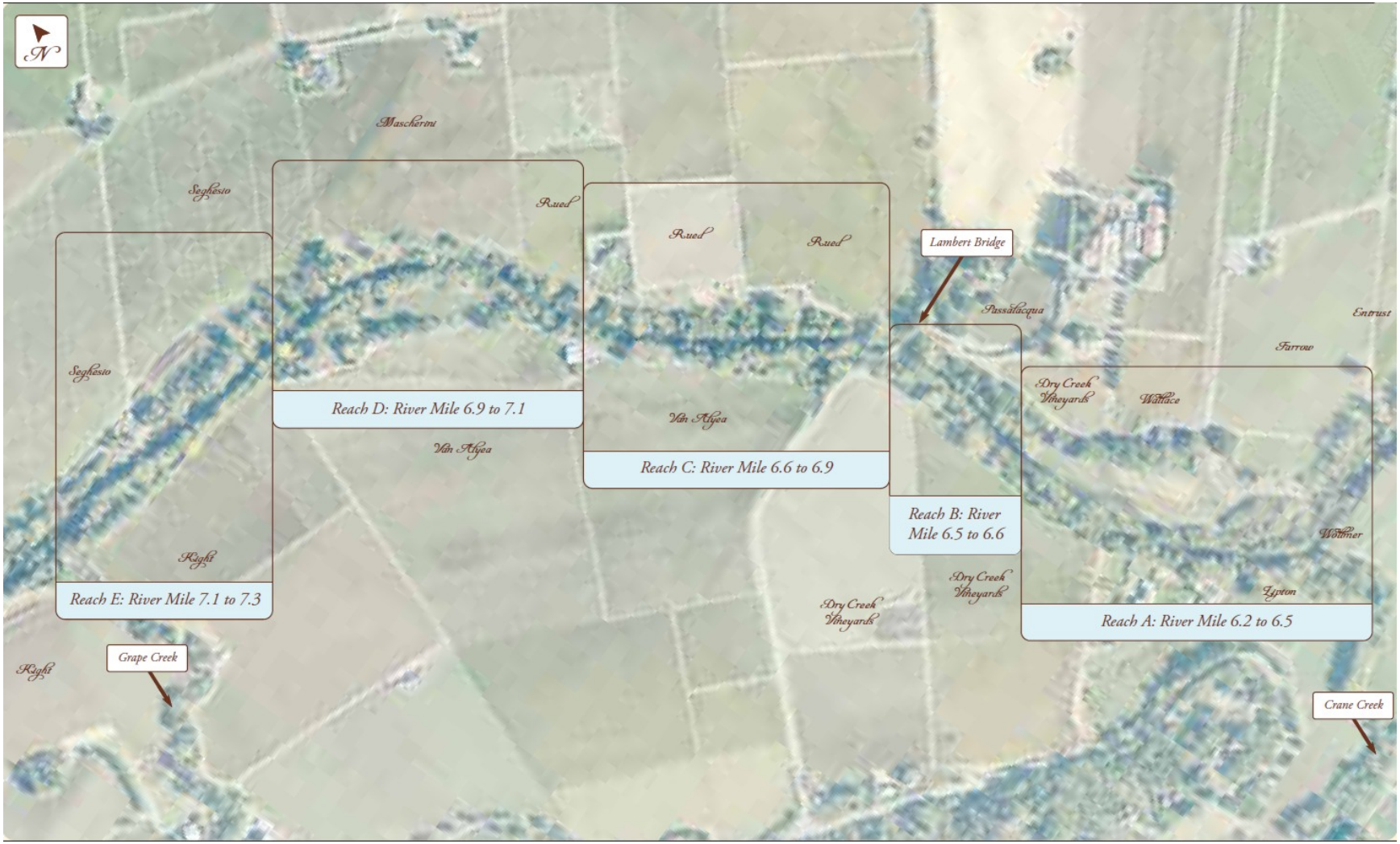


FIGURE 2. KEY TO DEMONSTRATION PROJECT AREA RIVER MILE FIGURES

Reach A

River Mile 6.2 to 6.5

This is one of the more complex and dynamic sub-reaches in the Demonstration Reach. It includes a series of riffles, glides and pools, one side channel that flows in the winter, and a large area where the creek used to flow and now only flows during very high winter floods. Crane Creek flows into a deep pool near the downstream end of the reach, and there is one area that is actively eroding. This sub-reach has a number of significant enhancement opportunities, including backwater and side channels, log jams, riffle construction, streambank stabilization and riparian vegetation management. The symbols below appear on the "Proposed Enhancement" photo (next page) to show which of the enhancements might be utilized and where. Enhancement solutions are described in detail on pages 3 through 6.

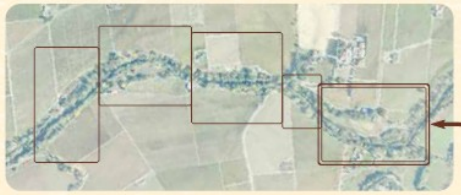
Streambank Stabilization

Riffle Construction

Backwater Channels

Log Jams

Riparian Vegetation Management



Reach A: Existing Condition
Scale: 1 inch equals 150 feet

FIGURE 3. EXISTING CONDITIONS FOR RIVER MILE 6.2 TO 6.5

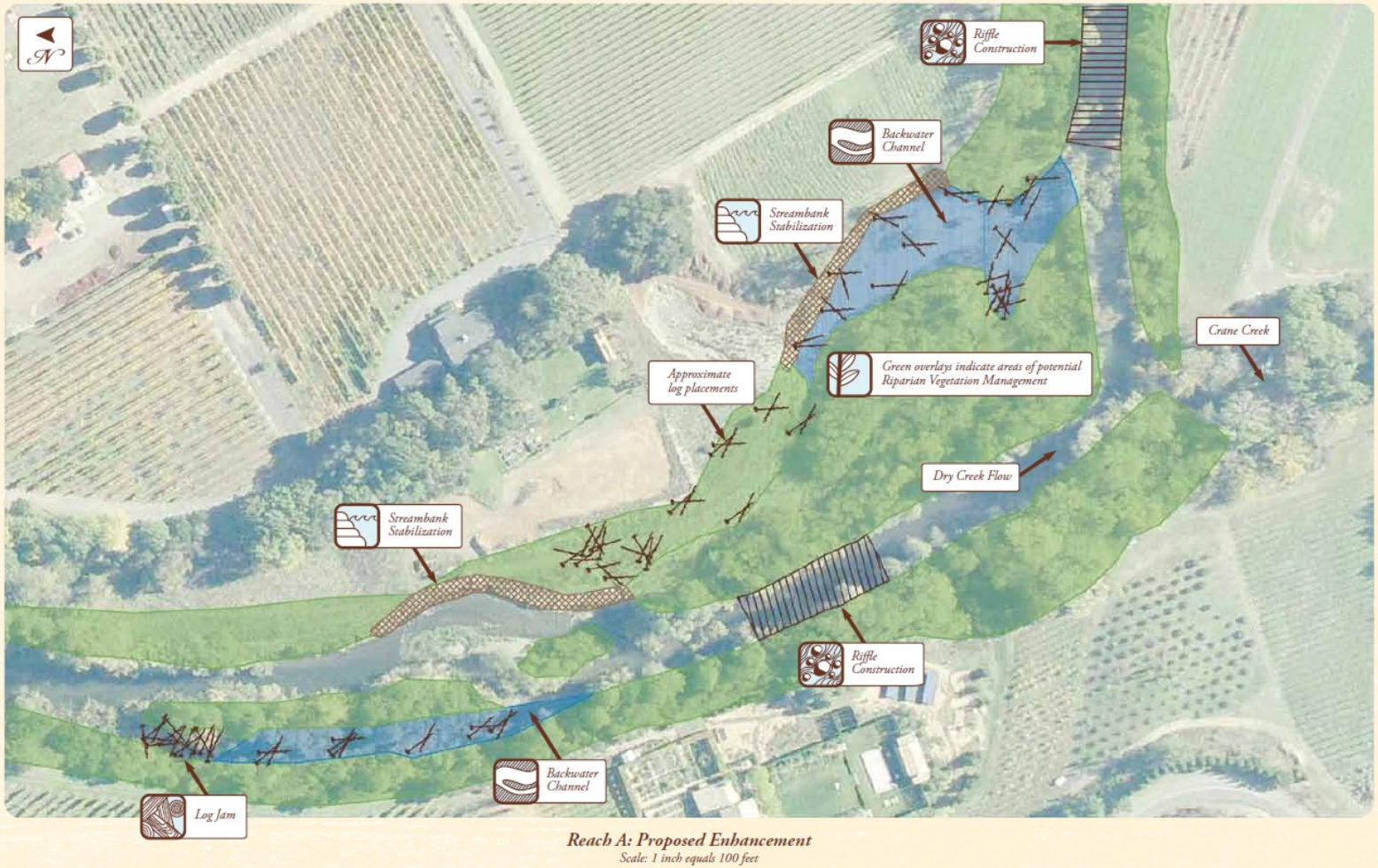


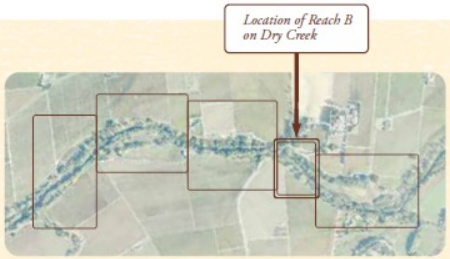
FIGURE 4. PROPOSED ENHANCEMENT FOR RIVER MILE 6.2 TO 6.5

Reach B

River Mile 6.5 to 6.6

This short sub-reach is immediately downstream of Lambert Bridge. In this area, the stream is confined and includes a small bedrock cascade and other bedrock outcrops, a short riffle, two glides and two pools. Enhancement opportunities in this subreach are limited to riparian vegetation management. The symbols below appear on the "Proposed Enhancement" photo (next page) to show where the enhancement might be utilized. Enhancement solutions are described in detail on pages 3 through 6.

Riparian Vegetation Management



Reach B: Existing Condition
Scale: 1 inch equals 150 feet

FIGURE 5. EXISTING CONDITIONS FOR RIVER MILE 6.5 TO 6.6

FIGURE 6. PROPOSED ENHANCEMENT FOR RIVER MILE 6.5 TO 6.6

FIGURE 7. EXISTING CONDITIONS FOR RIVER MILE 6.6 TO 6.9

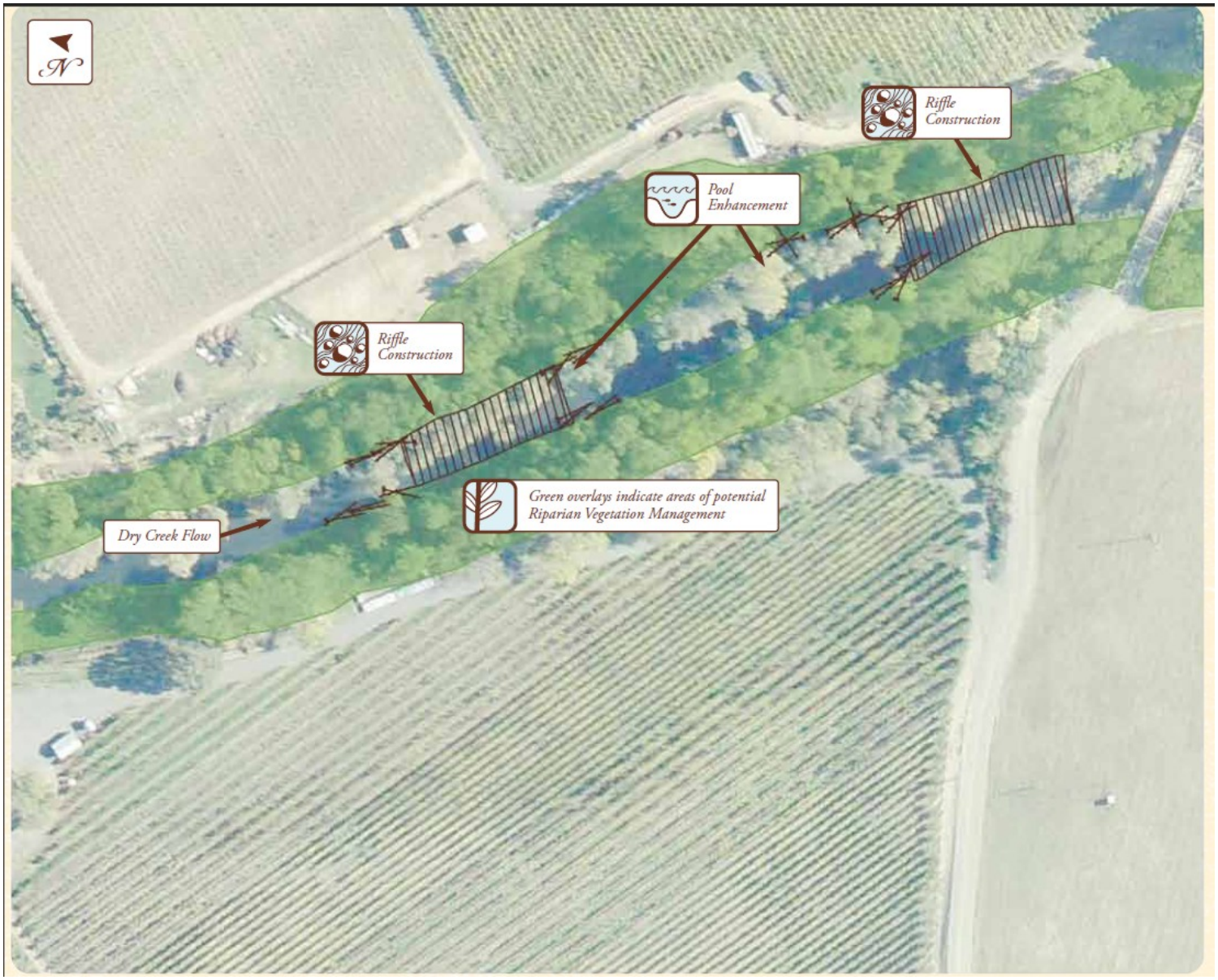


FIGURE 8. PROPOSED ENHANCEMENT FOR RIVER MILE 6.6 TO 6.9

FIGURE 9. EXISTING CONDITIONS FOR RIVER MILE 6.9 TO 7.1

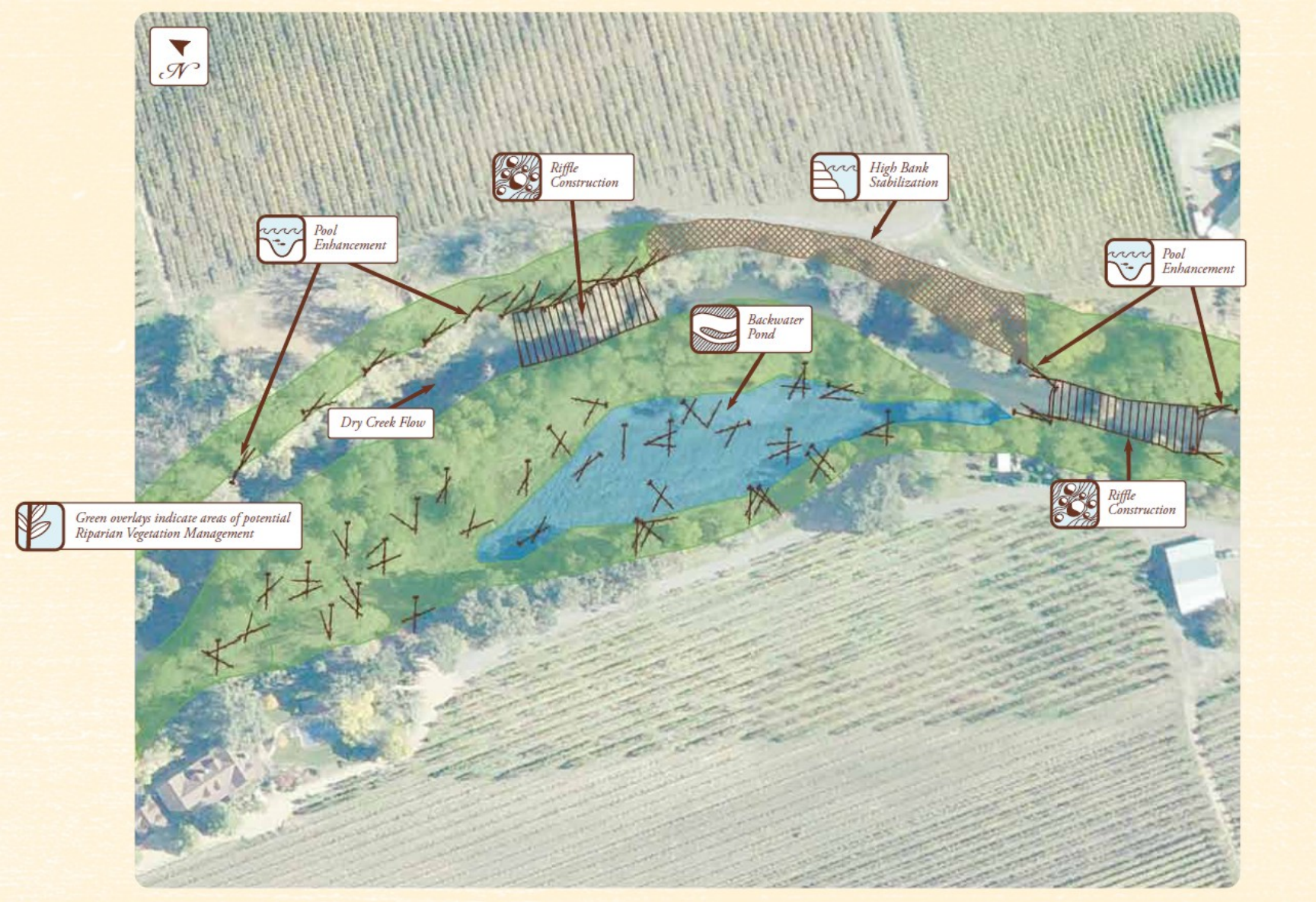


FIGURE 10. PROPOSED ENHANCEMENT FOR RIVER MILE 6.9 TO 7.1

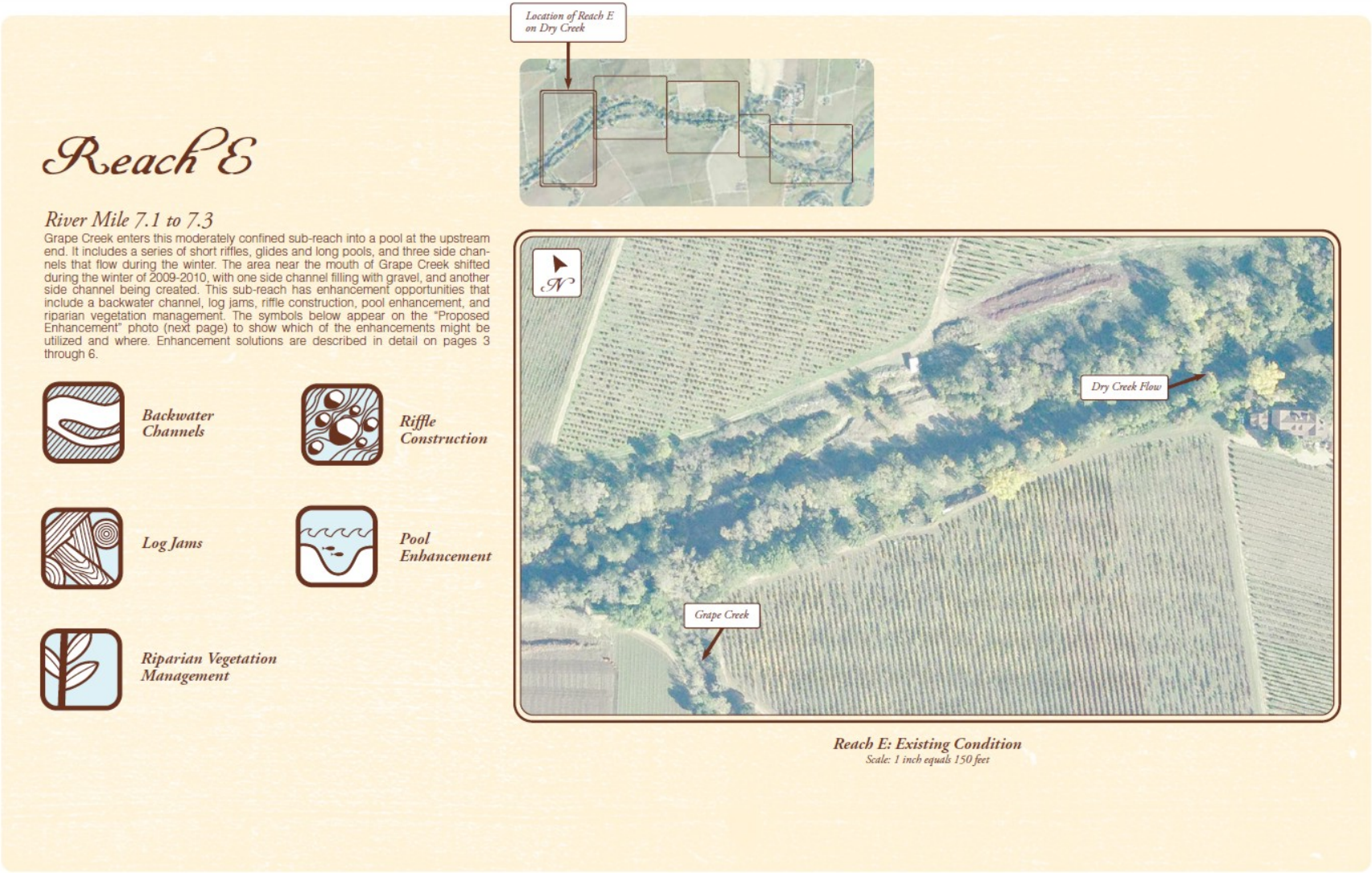


FIGURE 11. EXISTING CONDITIONS FOR RIVER MILE 7.1 TO 7.3

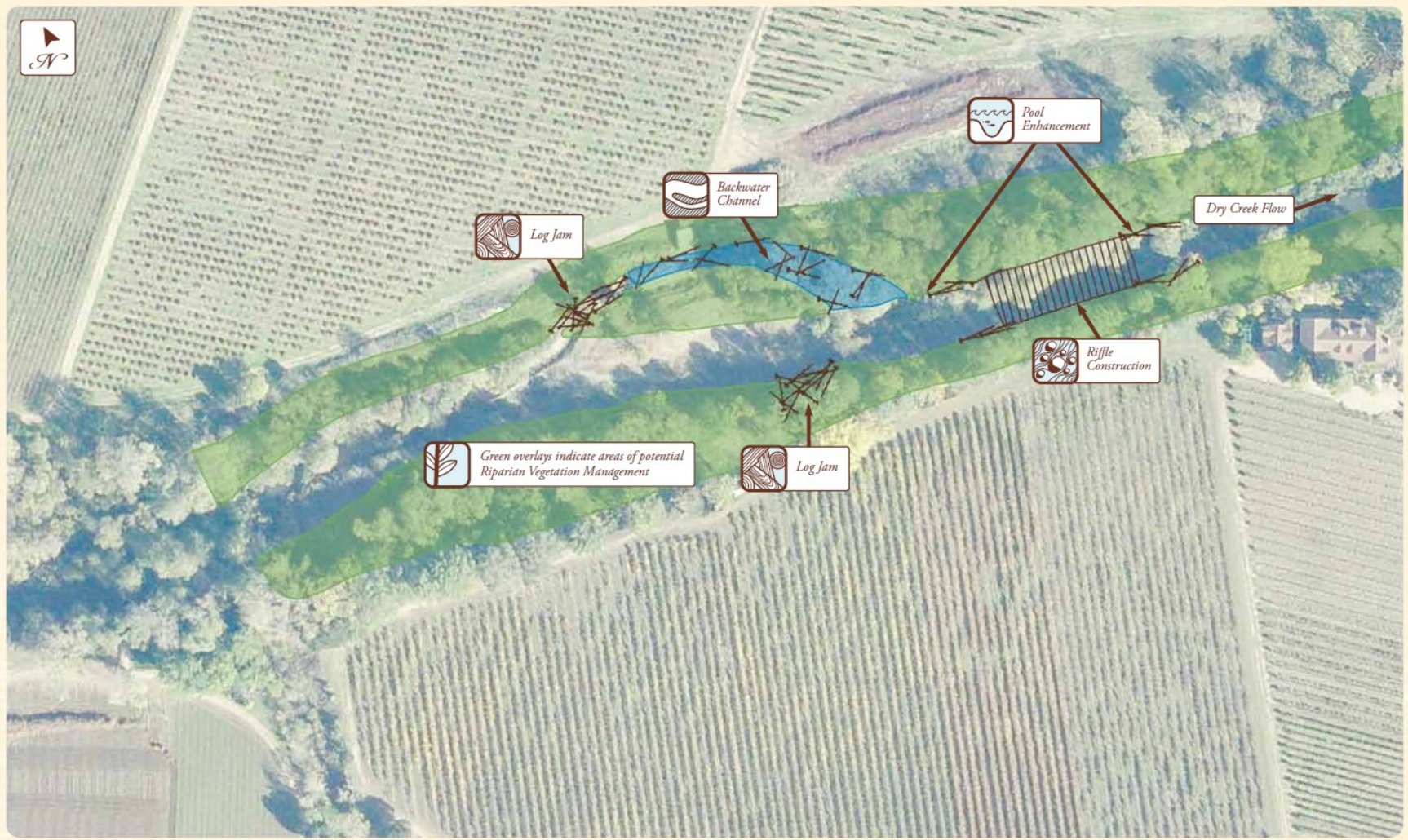


FIGURE 12. PROPOSED ENHANCEMENT FOR RIVER MILE 7.1 TO 7.3

FIGURE 13. BANK STABILIZATION EXAMPLE GRAPHIC

FIGURE 14. DRY HIGH-BANK STABILIZATION EXAMPLE GRAPHIC

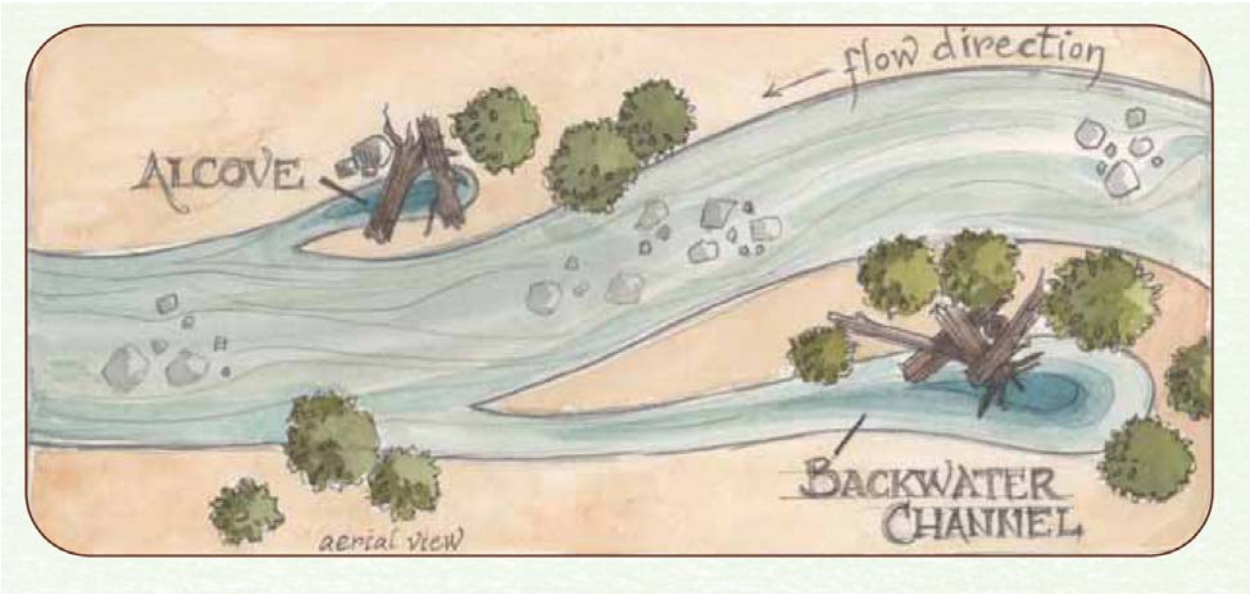


FIGURE 15. BACKWATER CHANNEL EXAMPLE GRAPHIC

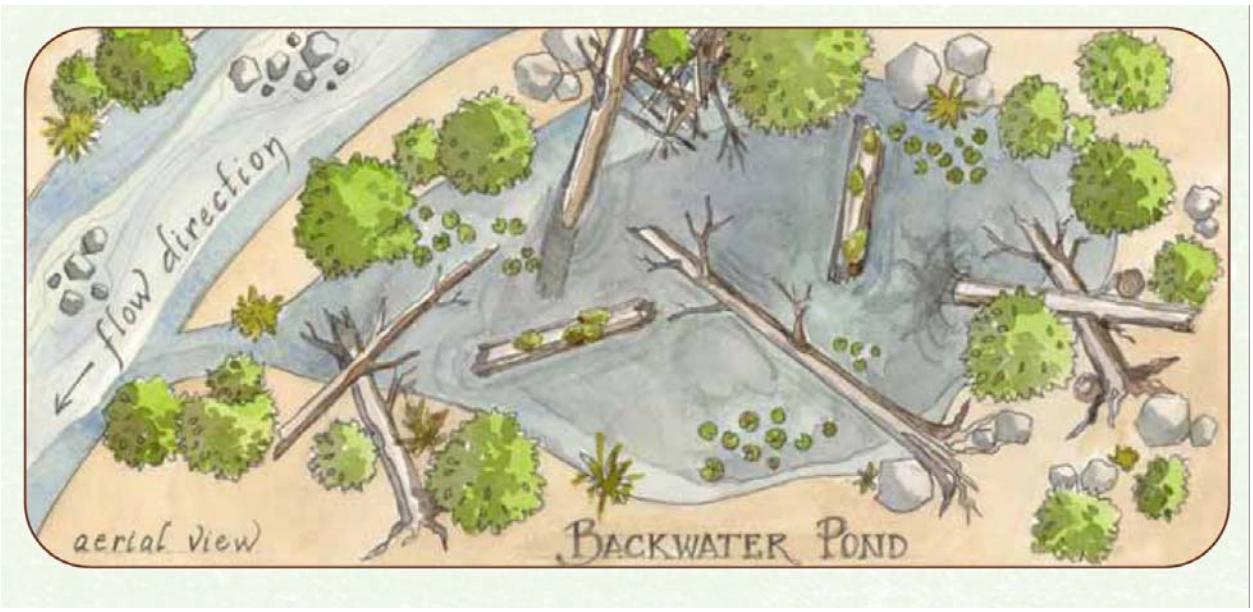


FIGURE 16. BACKWATER POND EXAMPLE GRAPHIC

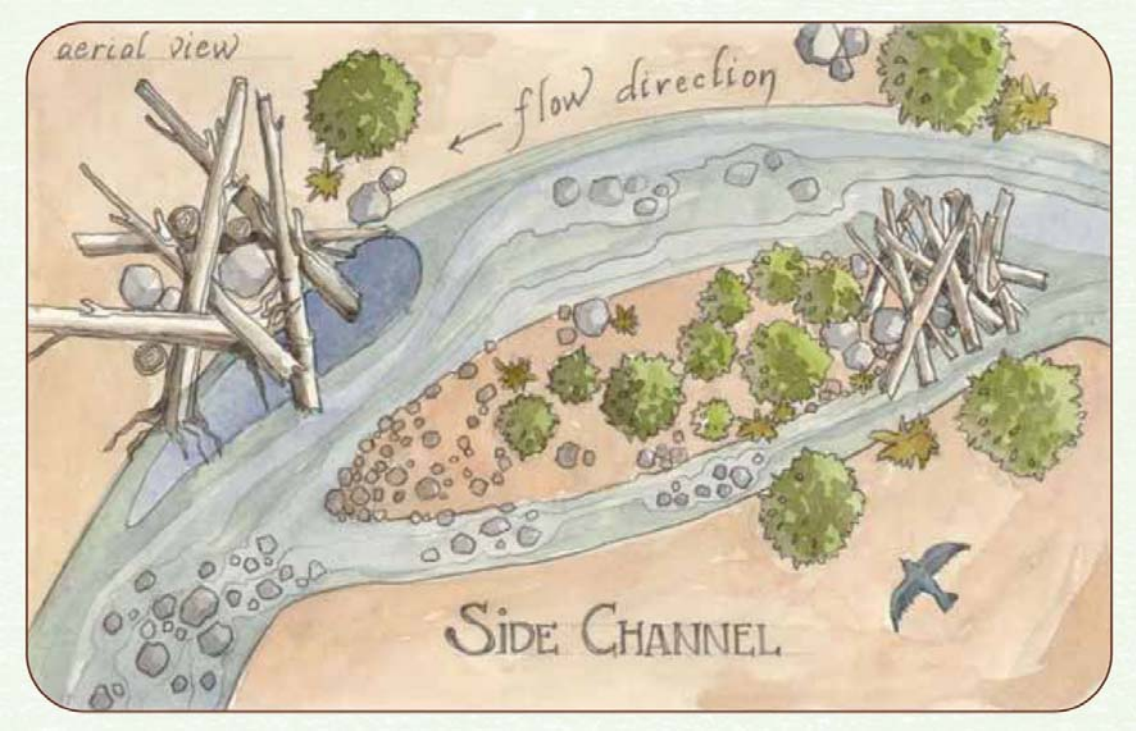


FIGURE 17. SIDE CHANNEL EXAMPLE GRAPHIC

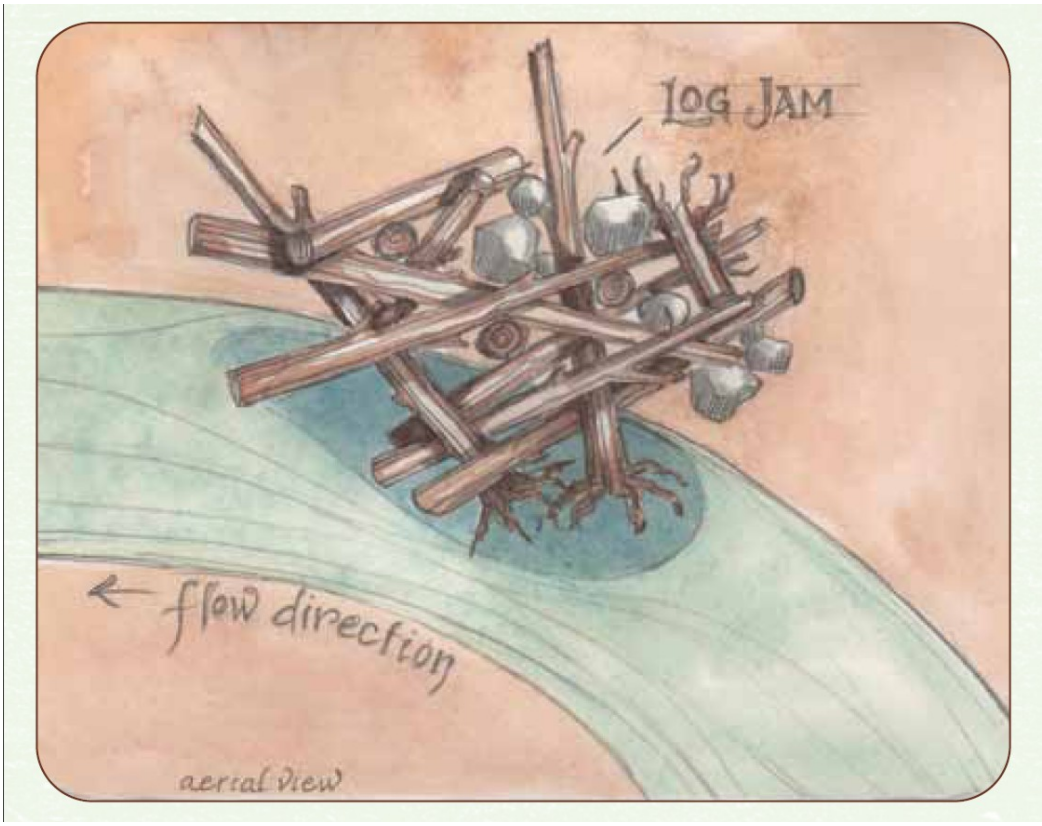


FIGURE 18. LOG JAM EXAMPLE GRAPHIC

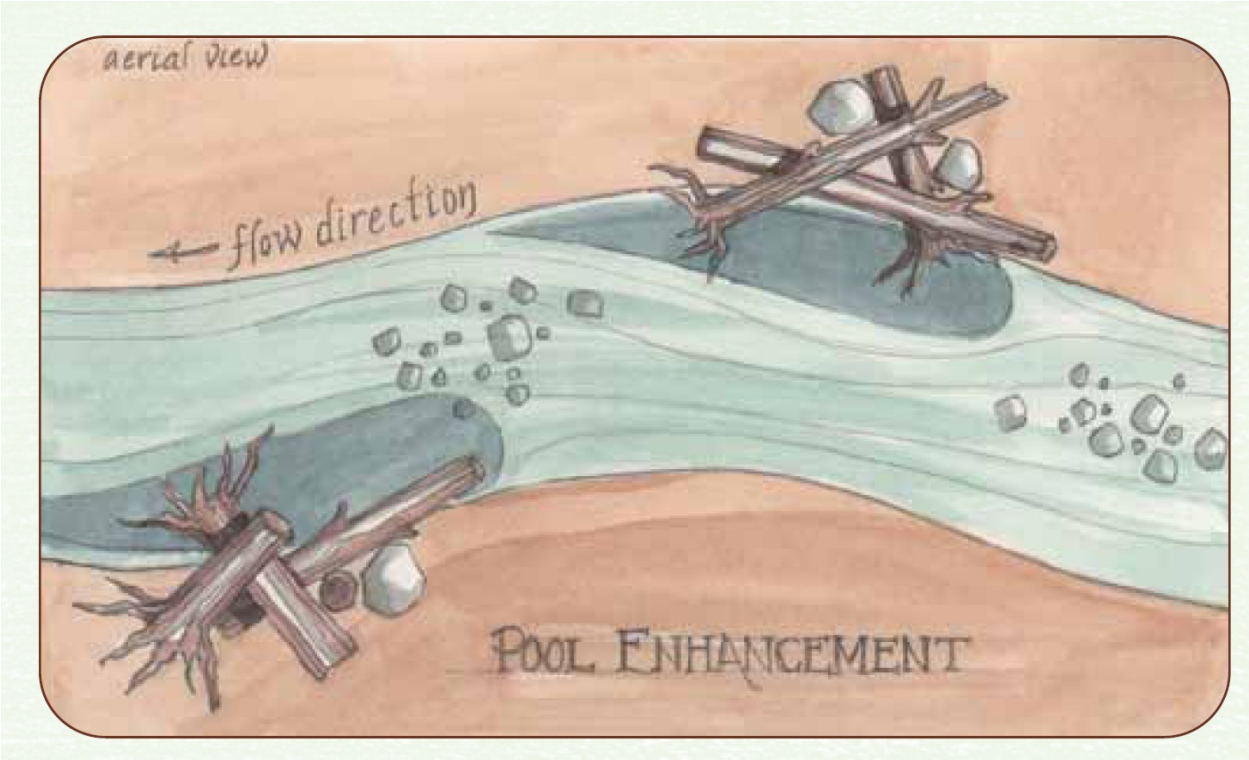


FIGURE 19. POOL ENHANCEMENT EXAMPLE GRAPHIC

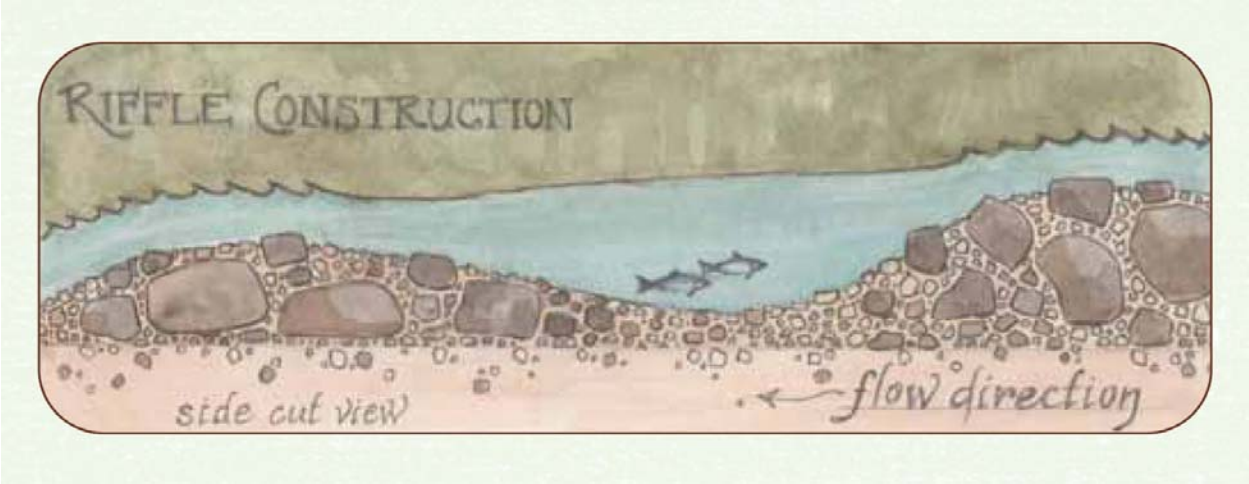


FIGURE 20. RIFFLE CONSTRUCTION EXAMPLE GRAPHIC

A preliminary estimate of proposed habitat types in comparison to the existing conditions within the project area is shown below in Table 1. Figure 21 provides a graphical representation of where the proposed habitat changes would occur within the project area.

Table 1. Existing and Proposed Instream Habitat Types and Areas

Habitat Type	Existing Habitat Area (square feet)	Proposed Habitat Area (square feet)	Change in Area from Existing to Proposed (square feet)
Alcove	7,969	67,047	+59,078
Cascade [a]	6,552	6,552	0
Flatwater [b]	62,044	44,082	-17,962
Pool	211,622	184,956	-26,666
Riffle	30,075	65,500	+35,425

[a] Cascade: Creek flow which descends over a series of rock steps
[b] Flatwater: Creek flow which is level or slow moving

PROJECT ALTERNATIVES

The Water Agency is required under the Russian River Biological Opinion to implement at least one mile of habitat enhancements along the mainstem of Dry Creek by 2014 to demonstrate the feasibility and methods for additional habitat enhancement along Dry Creek to create high quality habitat for coho, Chinook, and steelhead. Because of this requirement under the Russian River Biological Opinion, alternatives to the proposed project are limited to alternative locations and types of enhancements to implement along Dry Creek. Alternative locations, such as working in tributaries to Dry Creek or in other tributaries of the Russian River would not meet the requirement of the Russian River Biological Opinion. As part of the Dry Creek Habitat Enhancement Project design process, the entire 14 miles of Dry Creek from its confluence with the Russian River to Warm Springs Dam was evaluated to identify existing habitats and areas of interest with potential for habitat restoration. Numerous areas of interest were identified along the 14 miles of Dry Creek. The areas of interest selected for the Dry Creek Habitat Enhancement Demonstration Project are areas that provide a range of different habitat enhancement techniques (bank stabilization, creation of alcoves/ponds/backwaters, installation of large woody debris, enhancing pools, and creating riffles) and are located in an area owned by a group of willing landowners.

If the demonstration project shows that habitat enhancement is successful for creating high quality habitat, then an additional 2 miles of habitat enhancement projects would be implemented along Dry Creek. Once the additional 2 miles of habitat are constructed, the success at providing high quality habitat for coho and steelhead would be evaluated. If the habitat construction is determined to have

successfully created high quality coho and steelhead habitat, then an additional 3 miles of habitat enhancement projects would be constructed (for a total of 6 miles of habitat). This Initial Study only covers the first mile considered as part of the Dry Creek Habitat Enhancement Demonstration Project. Additional environmental documentation would be required for any habitat enhancement project proposed beyond the one mile of habitat enhancement being considered as part of the Dry Creek Habitat Enhancement Demonstration Project. The Russian River Biological Opinion also includes an alternative stipulation following construction of a total of 3 miles of habitat enhancement along Dry Creek. If monitoring shows that the habitat enhancement projects have not resulted in the creation of the expected features necessary for high quality coho and steelhead habitat, then the Water Agency is to proceed with implementing a bypass pipeline between Warm Springs Dam and the Russian River to alleviate the need for high flows in Dry Creek for water supply purposes. In the event that habitat enhancement in Dry Creek does not provide the necessary high quality salmonid habitat, the Water Agency would be required to prepare additional environmental documentation before approving and constructing a Dry Creek bypass pipeline.

The No Project alternative would mean that the first mile of habitat enhancement would not be constructed and would result in the continued jeopardy of coho and steelhead in Dry Creek as a result of the Water Agency's existing water supply operations. The No Project alternative would also result in the Water Agency being out of compliance with a federal order and State consistency determination to implement habitat enhancement in Dry Creek in accordance with the Russian River Biological Opinion.

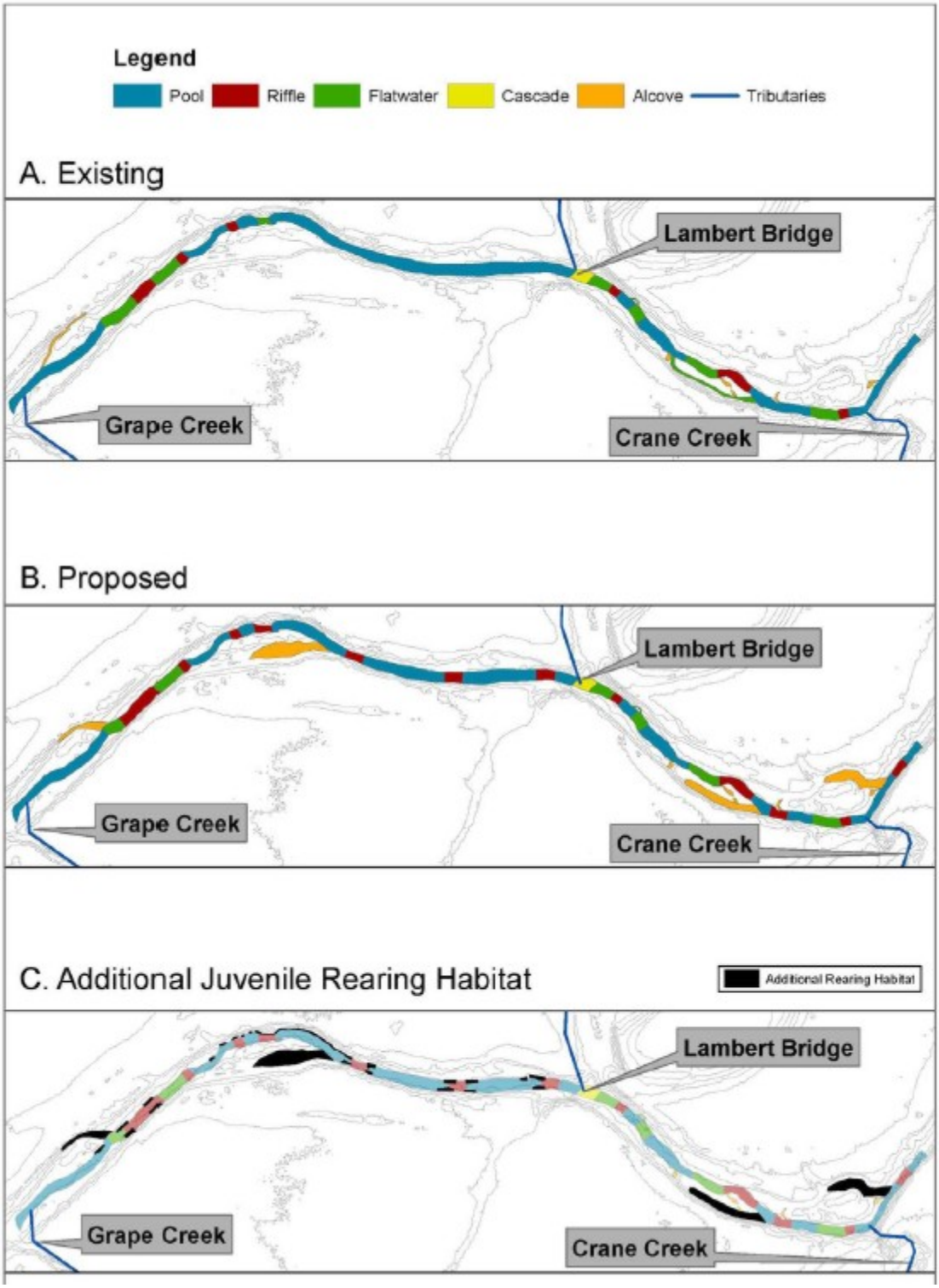


FIGURE 21. PROPOSED HABITAT CHANGES

NOTICE OF PREPARATION AND SUMMARY OF COMMENTS

On June 24, 2010, a Notice of Preparation (NOP) of an Initial Study was distributed to the following jurisdictional and permitting agencies:

- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- California Regional Water Quality Control Board, North Coast Region

Copies of the NOP were also posted with the California Governor's Office of Planning and Research's State Clearinghouse, the Sonoma County Clerk, and sent to property owners adjacent to the project area. Comments regarding the proposed project were received from the California Department of Fish and Game, California Department of Toxic Substance Control, Sonoma County Winegrape Commission, and a private landowner. Copies of the NOP and comments received are included in Appendix A. A summary of written comments and the Water Agency's responses are provided below.

California Department of Fish and Game

Summary of Comments: The California Department of Fish and Game (CDFG) submitted comments on the NOP as a means to inform the Water Agency of CDFG's concerns regarding sensitive resources which could potentially be affected by the project. CDFG requested that the Initial Study include a discussion of each of the proposed habitat enhancement types and discuss the expected function, the initial habitat value of each, the long-term benefits to salmonid species, the feasibility of success, and the sustainability and long-term maintenance of each enhancement type. CDFG requested that any enhancement plan should reference and use the guidance provided in the California Salmonid Stream Habitat Restoration Monitoring (CDFG 1998) during the design and review process to ensure compliance with CDFG standards and procedures. CDFG requested that the Initial Study contain a description of the vegetation communities, wildlife habitats, creeks, wetlands, and other important habitat features. The Initial Study should identify and discuss any significant impacts to habitats and special-status species.

Response: The Water Agency has included a description of the proposed project components as well as a breakdown of the intended habitat types that would be created. The Water Agency's design consultant is coordinating their design with NMFS and CDFG staff to ensure that both the project design as well as implementation, effectiveness, and validation monitoring are in compliance with NMFS and CDFG standards. The Water Agency will submit a permit application to CDFG for a Streambed Alteration Agreement under Section 1600 of the California Fish and Game Code.

California Department of Toxic Substances Control

Summary of Comments: The California Department of Toxic Substances Control (CDTSC) recommended that a historical assessment of past uses be done to determine the existence of potential hazardous materials within the project area.

Response: The Water Agency had a hazardous materials assessment conducted for the Dry Creek Valley. The results of the hazardous materials assessment within the project area are discussed in the environmental checklist below.

Sonoma County Winegrape Commission

Summary of Comments: Nick Frey, President of the Sonoma County Winegrape Commission, submitted comments in support of the proposed Dry Creek Habitat Enhancement Demonstration Project.

Response: The Water Agency acknowledges and appreciates the comment in support for this project.

Gordon Winstrom (resident/grape grower in Dry Creek Valley)

Summary of Comments: Mr. Winstrom stated that he has a problem with the amount of money being spent for fish in Dry Creek (especially in comparison to how little we spend per child in education). Mr. Winstrom wanted to know if we have calculated a dollar figure per fish that is being spent.

Response: The Water Agency is complying with the requirements outlined in the Biological Opinion issued by NMFS which directs the Water Agency to implement changes in operations and construction of enhancements to improve habitat for the three listed fish species found in Dry Creek. The Water Agency is obligated to implement the requirements of the Biological Opinion regardless of the costs to implement the project. The Water Agency has not calculated a "dollar spent per fish" number because the overall success of the project will be measured by the quality and quantity of habitat in Dry Creek, not by the number of fish.

ENVIRONMENTAL SETTING

The Dry Creek watershed is located in the interior coast range of northern Sonoma and southern Mendocino counties, approximately 30 miles from the Pacific Ocean and 60 miles north of San Francisco Bay. Dry Creek drains 217 square miles of rugged terrain. The Dry Creek watershed is approximately 32 miles long and 7 miles wide and is in the southwestern portion of the Russian River Basin. Dry Creek flows into the Russian River just downstream of Healdsburg. The Dry Creek Habitat Enhancement Demonstration Project area is located along a 1-mile reach of Dry Creek near Lambert Bridge Road.

The confluence of Grape Creek with Dry Creek marks the upstream extent of the project area, while the confluence of Crane Creek with Dry Creek marks the downstream end of the project area.

Topography

Elevations within the Dry Creek watershed range from 70 feet near the mouth to nearly 3,000 feet near the headwaters, with half of the watershed above 1,100 feet in elevation. Elevations within the project site range from 145 feet to 130 feet. Downstream of the Dry Creek confluence at Healdsburg (Russian River mile 32), the Russian River flows westerly to the Pacific Ocean at Jenner, California. Warm Springs Dam is located on Dry Creek at river mile 13.9, at the confluence of Dry and Warm Springs Creeks. The 130 square mile watershed located above the dam is characterized by steep, mountainous terrain with basin slopes ranging from 30% to 80% and channel gradient ranging from 8 to 200 feet per mile (0.2 to 3.8%; Army Corps of Engineers 1987a). Downstream of the dam, lower Dry Creek is a gravel bed river that flows through a flat agricultural valley, 0.5 to 1 mile wide with approximate average gradient of 0.2%. Principal tributaries entering Dry Creek below Warm Springs Dam include Pena Creek (drainage area 22.3 sq. mi.) and Mill Creek (drainage area 22 sq. mi.). The project area is located approximately 6 to 7 river miles upstream of the confluence of Dry Creek and the Russian River. Throughout the project site, bank heights range from 5 to 30 feet high.

Soils and Geology

The *Sonoma County Soils Survey* (Plate 39, pages 28, 66, 87) shows the project area primarily consisting of riverwash materials (RnA). RnA soils are described as consisting of very recent depositions of gravel, sand, and silt alluvium along major streams and their tributaries. The surrounding higher terrace lands adjacent to Dry Creek are shown as primarily several different classifications of Yolo loam/yolo sandy loam (YnA, YmB, YoB, and YlA) along with a smaller areas of Pajaro gravelly loam (PbB) and Cortina very gravelly loam (CsA). The project site is located within the alluvial valley plain of the Dry Creek Valley. The soil series found in the project area consist of well-drained, recently formed alluvial materials.

Botanical and Wetland Resources

Riparian vegetation, or the plants associated with a stream environment, once covered much of the floodplains of the Russian River and its tributaries. Considerable acreage of riparian vegetation was removed between the mid-1800s and the mid-1900s. Vegetation was removed for agriculture, gravel mining, logging, flood control, and urbanization. Prior to the construction of Warm Springs Dam (1984), the flow regime for Dry Creek was seasonal with intermittent pools each year in the summer and fall coupled with much higher scouring flows in the winter. As a result of land use practices and this highly seasonal flow regime, riparian vegetation along Dry Creek existed in thin and discontinuous strips. After the completion of Warm Springs Dam, summer flows in Dry Creek have had a consistent base flow while winter peak

flows have been much reduced relative to natural flow conditions. These changes have created conditions along Dry Creek where less scour occurs during winter flows and a consistent year-round supply of water is in the creek to support riparian vegetation. Today, relative to pre-dam conditions, riparian vegetation along Dry creek is continuous and more encroached upon the creek channel (Inter-Fluve Current Conditions Inventory Report, Page 30).

Riparian vegetation generally provides the following benefits: [1]

- Contributes structure to streams, which provide shelter for fish and aquatic organisms (i.e. scour pools, woody debris, root mass).
- Provides nutrient contributions, in the form of leaf litter and insects, for fish and aquatic organisms.
- Maintains cool water temperatures by shading all or part of the stream.
- Supports wildlife corridors, offering shelter and forage.
- Provides stabilization of banks and/or erosion control, to prevent loss of agricultural land.
- Prevents large woody debris from entering vineyards and orchards during flood peaks.

For the reasons listed above, riparian zones have a high value for wildlife. Often they contain plant species native to California which provide excellent habitat for a variety of wildlife. A list of common native riparian vegetation found along Dry Creek is listed in Table 2.

Table 2. Partial List of Native Riparian Vegetation Common to Dry Creek

COMMON NAME	SCIENTIFIC NAME
Fremont's cottonwood	*Populus fremontii*
Arroyo willow	*Salix lasiolepsis*
Yellow willow	*Salix lucida ssp. lasiandra*
Red willow	*Salix laevigata*
Sandbar willow	*Salix exigua*
White alder	*Alnus rhombifolia*
Northern California black walnut	*Juglans californica var. hindsii*
Mulefat	*Baccharis salicifolia*
California blackberry	*Rubus ursinus*
California wild grape	*Vitis californica*
Oregon ash	*Fraxinus latifolia*
Box elder	*Acer negundo californicum*
Valley oak	*Quercus lobata*
California bay laurel	*Umbellularia californica*
Mugwort	*Artemisia douglasiana*
Blue elderberry	*Sambucus mexicana*
Snowberry	*Symphoricarpos albus*
Dutchman's pipe	*Aristolochia californica*
Honeysuckle	*Lonicera hispidula var. vacillans*

[1] Circuit Rider Productions, Inc. Riparian Habitat Status Report. January 1994.

The vegetated sections of stream banks within the project site are dominated by an overstory of red willows (*Salix leavigata*), box-elders (*Acer negundo*), and white alders (*Alnus rhombifolia*) with an occasional cottonwood (*Populus fremontii*) and California bay (*Umbellularia californica*). The riparian understory is dominated by a mixture of Himalayan blackberry (*Rubus discolor*), California blackberry (*Rubus ursinus* var. *ursinus*), escaped grape (*Vitis vinifera*), and mugwort (*Artimisia douglasiana*). A few open areas without an overstory component exist within the project areas. These open areas are dominated by grasses (*Avena fatua, Bromus diandrus, Hordeum murinum, Lolium multiflorum*) and other herbaceous plants (*Verbascum Thapsus, Melilotus albus, Hirschfeldia incana*).

Areas potentially subject to the jurisdiction of the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act within the project site are restricted to the Section 404 waters of the United States below the ordinary high water (OHW) mark.[2,3] The total amount of existing potential Corps jurisdictional areas within the project site is approximately 19.4 acres consisting of 6.8 acres of open waters and 12.6 acres of vegetated wetlands within the OHW. Under the proposed project, the amount of potential Corps jurisdictional areas within the project site is estimated to be approximately 20.4 acres consisting of 9.4 acres of open water and 11 acres of vegetated wetlands within the OHW.

A list of special status plant species with potential to occur within the project site is provided in Appendix B-1. The list was developed using recorded occurrences of special status plant species within the Geyserville, California, U.S. Geological Survey (USGS) quadrangle as documented in the California Natural Diversity Data Base (CNDDB).[4] The project area does not provide the potential habitat for any of the special status plant species identified from the Geyserville quadrangle in the CNDDB search. Botanical surveys of the project area were performed on August 31, 2010. Known occurrences of Northern California black walnut (*Juglans californica* var. *hindsii*), were not listed from the Geyserville quadrangle in the CNDDB search, but it is considered to have the potential to occur in the project area because this species occurs in riparian woodlands and is known to occur elsewhere in Sonoma County. Northern California black walnut is not an officially listed rare, threatened, or endangered species, but it is considered a Federal Species of Concern. No Northern California black walnut trees were observed, but black walnut (*Juglans nigra*) was observed within the project site along the upper bank of Dry Creek upstream and downstream of Lambert Bridge. A complete list of plant species observed during the botanical surveys is provided in Appendix C.

[2] The ordinary high water (OHW) mark is a line on the shore established by fluctuations of water indicated by physical characteristics such as a clear, natural line on the bank, shelving, changes in soil, destruction of terrestrial vegetation, or presence of litter and debris.
[3] Waters of the United States are areas ponded for a duration to preclude vegetation from establishing and are subject to Section 404 of the Clean Water Act and U.S. Army Corps of Engineers jurisdiction.
[4] California Natural Diversity Data Base, search of Geyserville , California USGS 7.5 minute quadrangles, 2011.

Wildlife and Fisheries

A habitat inventory was conducted in 2009 to census aquatic habitat (measured at approximately 100 cfs) for coho salmon and steelhead in Dry Creek downstream of the Warm Springs Dam. The inventory found that Dry Creek is composed of 26% riffles, 23% pools, 7% scour pools, 44% flatwaters and less than 1% cascades based on the relative frequency of mainstem habitats. Pool depths generally decreased in the downstream direction, with a greater proportion of scour pools in the middle to upstream end of the survey area. Overall, there was far more flatwater than riffle habitat (44% of mainstem habitats by frequency versus 26% for riffles).

Dry Creek has been substantially altered from its pre-Warm Springs Dam conditions. Prior to the construction of Warm Springs Dam, the middle and lower reaches of Dry Creek were moderately warm (based on fish assemblage present) and went dry in its lower reaches.[5] The pre-Warm Springs fish community was assessed in the early 1950s as part of a non-game species eradication program conducted by the CDFG. This program was designed to reduce non-salmonid populations through poisoning large sections of tributaries and the mainstem where these species dominated the fish assemblages.[6] The rationale for this project was the belief that these "rough fish" were responsible for depressing steelhead populations. Dry Creek was partially treated with Rotenone (a fish toxicant) in 1952 and 1953 and sampled with electrofishing gear in 1954 and 1955. Areas treated included Dry Creek from just upstream of Cherry Creek (above the current Warm Springs Dam site) downstream 8 miles to where streamflow became subsurface, as well as in Galloway, Cherry, Warm Springs, Pena, and Mill creeks. At the time of the treatment, California roach, Sacramento sucker, and pikeminnow dominated the fish assemblages in the treated streams. Tule perch were noted as being well distributed in small numbers. Juvenile steelhead were reported to be locally abundant, but scarce overall.

Currently, flows in lower Dry Creek are maintained well above pre-dam summertime levels through releases from Warm Springs Dam. In addition, the releases originate from deep within Lake Sonoma, so that artificially cold water temperatures are maintained. The changes have had mixed impacts on the fish community in the creek. It was assumed that the cold water released from the dam would likely result in a change in the fish community from one dominated by a warm water assemblage to one dominated by salmonids. However, the increased streamflow resulted in stream velocities above suitable levels for rearing juvenile salmonids. This latter impact was assessed through a flow-habitat assessment study.[7] The conclusion reached was that, overall, lower flows provide superior habitat for rearing salmonids in Dry Creek

[5] Pintler, H.E. and W.C. Johnson. Chemical control of rough fish in the Russian River drainage, California. Inland Fisheries Administrative Report No. 56-13. 1956.

[6] Pintler, H.E. and W.C. Johnson. Chemical control of rough fish in the Russian River drainage, California. Inland Fisheries Administrative Report No. 56-13. 1956.

[7] Russian River Biological Assessment Executive Committee. Flow-Habitat Assessment Study. Prepared by Entrix, Inc. November 21, 2003.

compared to higher flows. While this result may at first appear counterintuitive, several factors affect fish habitat in Dry Creek. Flood control operations have greatly altered the frequency, timing, duration, and magnitude of high flow events. Channel incision and the loss of a functional floodplain have resulted in a relatively narrow channel. In reaches confined by bank stabilization projects, armoring of streambanks has led to a loss of stream sinuosity. Stable low flows in the summer and reduced flood flows in the winter have led to an encroachment of a relatively stable riparian community along the shoreline. The combination of these factors has resulted in a loss of habitat diversity and an overall increase in stream velocities, which reduces habitat quality for juvenile salmonids. Under current conditions, Dry Creek is thought to provide little habitat for rearing coho salmon.[8] The reason for the lack of coho habitat was cited as poor channel structure (high velocities and the lack of deep pools with woody debris). The purpose of the Dry Creek Habitat Enhancement Demonstration Project is to implement and evaluate a variety of enhancement methods. Although the existing quantity of rearing habitat for coho is considered low, coho are known to occur in the area. Coho have also been stocked in different tributaries of Dry Creek, including in Grape Creek at the upstream end of the Project Area, as part of a hatchery program to help recover the species. In addition to coho, both Chinook and steelhead are known to occur in the project area. Besides salmonids, California roach, sculpin (prickly and riffle), Sacramento sucker, pacific lamprey, western brook lamprey, bluegill, green sunfish, fathead minnow, hardhead, hitch, Russian River tule perch, Sacramento pikeminnow, Sacramento sucker, and threespine stickleback are other species known to occur within Dry Creek. Western pond turtles, a CDFG species of special concern, are known to occur in Dry Creek, although the existing high velocities, incised channel, and shaded canopy result in limited or marginal Western pond turtle habitat. An incidental benefit of the project would be that the backwater areas and woody structures could result in improved habitat for Western pond turtle in addition to the targeted salmonid species.

The project site provides a continuous strip of riparian habitat that is utilized by a variety of wildlife species. Dense vegetation and occasional snags are present to support nesting habitat for riparian bird species. The riparian habitat in the project area is also connected to continuous strips of riparian habitat both upstream and downstream of the project area running the length of Dry Creek from Warm Springs Dam to the Russian River. The riparian habitat along Dry Creek also connects to the riparian habitat found running up tributary streams in the area. The continuous nature of the riparian vegetation provides important habitat for wildlife utilizing the riparian corridor for food, shelter, and movement. Table 3 provides a representative list of terrestrial wildlife species utilizing riparian corridors in the Lake Sonoma and Dry Creek areas. Figure 22 shows species observed in the project area as identified in the CNDDB. The only species previously reported to the CNDDB in the project area are occurrences of pallid bat (*Antrozous pallidus*), which are a DFG species of special

[8] Russian River Biological Assessment Executive Committee. Flow-Habitat Assessment Study. Prepared by Entrix, Inc. November 21, 2003.

concern. Previous occurrences of pallid bat in the area were roost sites associated with residential buildings or winery structures.

Cultural Resources

A cultural resources survey was performed for the project site.[9] The survey goal was to evaluate the project area for the potential presence of any cultural or historic resources. The study included contacting the Native American Heritage Commission, Federated Indians of Graton Rancheria, Lytton Rancheria of Pomo Indians, Mishewal-Wappo Tribe of Alexander Valley, Ya-Ka-Ama and Suki Waters (Coast Miwok, Pomo), as well as performing archival research. Archival research included examination of library and project files at Tom Origer and Associates, a review of records on file at the Northwest Information Center at Sonoma State University, and a review of the State Office of Historic Preservation Historic Property Directory. A field reconnaissance of the study area was performed on November 17, 2010.

Archival research findings showed that five previous cultural resource surveys have been conducted in the vicinity of the project area including one that included the current project area. The previous surveys identified two archaeological sites within a one-mile radius of the current project. No cultural resources were recorded within the current study area. Historical maps show no buildings within the project area. The Lambert Bridge is a historic-era bridge that is located within the study area. No archaeological sites were found within the study area during the November 17, 2010 field survey.

RIGHT-OF-WAY

The proposed project is located on private property. The Water Agency would need to obtain the necessary property rights from the landowners to construct, monitor, and maintain the project.

LAND USE AND CONFORMANCE WITH GENERAL PLAN

The proposed project would not change the current approved land uses for the project site, which are zoned as agricultural lands and rural residential.[10] The proposed project would be constructed within areas that are already within the active high flow area of Dry Creek. Because the site is frequently inundated, existing land uses are restricted. The proposed project would not limit or restrict the existing agricultural activities that occur in the project area.

[9] Del Bondio, Lauren and Thomas M. Origer, M.A./R.P.A *An Archaeological Survey for the Dry Creek Habitat Enhancement Demonstration Project. Sonoma County, California.* December 23, 2010.

[10] Mendocino County Planning Department, *Land Use Inset Number 2*, adopted April 26, 1993.

Table 3. Representative Terrestrial Wildlife Species of Lake Sonoma and Dry Creek

COMMON NAME	SCIENTIFIC NAME
Birds	
Red-tailed hawk	*Buteo jamaicensis*
Golden eagle	*Aquila chrysaetos*
Peregrine falcon	*Falco peregrinus anatum*
California quail	*Lophortyx californicus*
Band-tailed pigeon	*Columba fasciata*
Great horned owl	*Bubo virginianus*
Acorn woodpecker	*Melanerpes formicivorus*
Steller's jay	*Cyanocitta stelleri*
Western Scrub jay	*Aphelocoma californica*
Common bushtit	*Psaltriparus minimus*
Wrentit	*Chamaea fasciata*
Western meadowlark	*Sturnella neglecta*
Red-winged blackbird	*Agelaius phoeniceus*
Black-headed grosbeak	*Pheucticus melanocephalus*
Brown towhee	*Pipilo fuscus*
White-crowned sparrow	*Zonotrichia leucophrys*
Mammals	
Raccoon	*Procyon lotor*
Striped skunk	*Mephitis mephitis*
Gray fox	*Urocyon cinereoargenteus*
Mountain lion	*Felis concolor*
Bobcat	*Lynx rufus*
California ground squirrel	*Spermophilus beecheyi*
Western gray squirrel	*Sciurus griseus*
Deer mouse	*Peromyscus maniculatus*
Brush mouse	*Peromyscus boylei*
Dusky-footed woodrat	*Neotoma fuscipes*
Brush rabbit	*Sylvilagus bachmani*
Blacktail deer	*Odocoileus hemionus columbianus*
Feral pig	*Sus scrofa*
Pallid bat	*Antrozous pallidus*
Amphibians	
California newt	*Taricha torosa*
California slender salamander	*Batrachoseps attenuatus*
Arboreal salamander	*Aneides lugubris*
Pacific treefrog	*Hyla regilla*
Foothill yellow-legged frog	*Rana boylii*
Reptiles	
Western pond turtle	*Emys marmorata*
Western fence lizard	*Sceloporous occidentalis*
Northern alligator lizard	*Gerrhonotus coeruleus coerulens*
Western yellow-bellied racer	*Coluber constrictor mormon*
Pacific gopher snake	*Pituophis melanoleucus catenifer*
Common garter snake	*Thamnophis sirtalis*
Western rattlesnake	*Crotalus viridis*

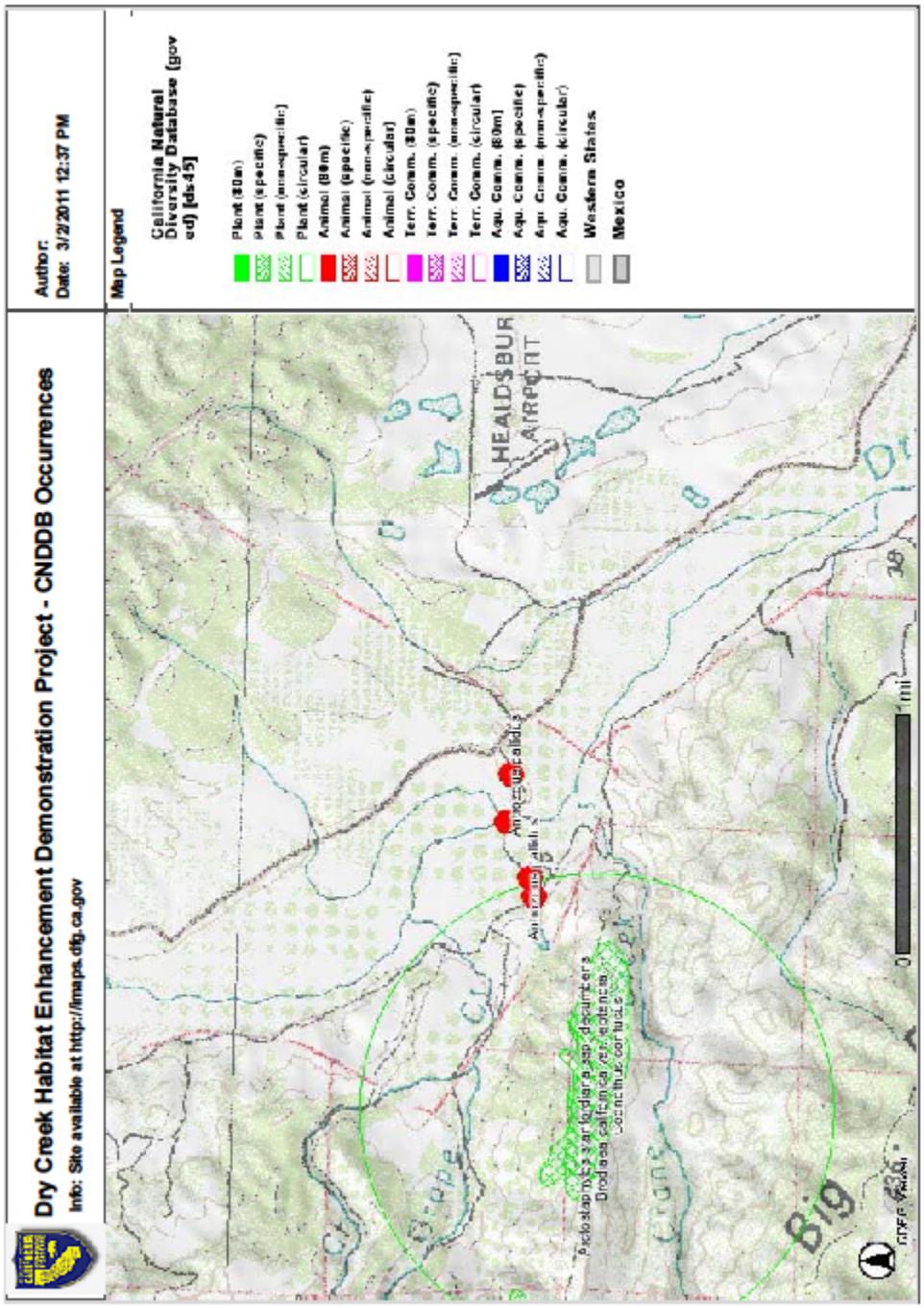


FIGURE 22. CNDDB OCCURRENCES

ENVIRONMENTAL EVALUATION AND MITIGATION MONITORING

The potential environmental impacts of the proposed project and related mitigation measures are identified in the Environmental Checklist. All of the impacts identified in the checklist can be mitigated to a level considered less than significant. Mitigation measures have been developed for impacts that fall within the "Less Than Significant with Mitigation" category. In addition, mitigation measures have been developed for some impacts that are not potentially significant, even without mitigation. The Water Agency proposes implementation of these mitigation measures to further minimize the less than significant impacts.

In compliance with Section 21081.6 of CEQA and the Water Agency's Jurisdiction-Wide Mitigation Monitoring Program, a Draft Mitigation Monitoring Plan (MMP) has been prepared and is included in Appendix E. At the conclusion of the Initial Study public review period, a Final MMP will be prepared, if needed, to incorporate any additional mitigation measures proposed by regulatory agency representatives or the public during the public review period. The Final MMP will be submitted to the Water Agency's Board of Directors, along with the Initial Study and Negative Declaration, for consideration and approval and adoption.

JURISDICTIONAL/PERMITTING AGENCIES

The following are public entities and agencies that may require review of the project or that may have jurisdiction over the project area:

- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- California Regional Water Quality Control Board, North Coast Region
- Sonoma County Permit and Resources Management Department

FINDING

On the basis of the Initial Study, the General Manager of the Sonoma County Water Agency has determined that although the proposed project may have a significant effect on the environment, there will not be a significant effect in this case because the effects can be mitigated to a less than significant level. Mitigation measures that have been incorporated in the proposed project are discussed below in the Environmental Checklist and in the MMP in Appendix E.

SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or

"Less Than Significant with Mitigation" as indicated by the checklist on the following pages.

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

ENVIRONMENTAL CHECKLIST

The following checklist is based on the Environmental Checklist Form (Checklist) included as Appendix G to the CEQA Guidelines (California Code of Regulations Title, Sections 15000 et. seq.) as adopted December 30, 2009 (effective March 18, 2010). The checklist provides a summary of potential impacts that may result from implementation of the proposed project.

With regard to the checklist, a "No Impact" response indicates that no impact would result from implementation of the project. A "Less Than Significant Impact" response indicates that an impact is involved, but is at a level which is less than significant. A "Less Than Significant With Mitigation" response indicates that an impact may potentially be significant, but the incorporation of mitigation measures would reduce the impact to a level of insignificance. For these responses, mitigation measures are included after the discussion of the impact. A "Potentially Significant Impact" response indicates that impacts may be significant if mitigation measures are unknown, infeasible, or not proposed. Each response is discussed at a level of detail commensurate with the potential for adverse environmental effect. The mitigation measures identified in this section would be incorporated into the project, and included in the Mitigation Monitoring Plan.

Supporting Information Sources for each response are indicated in parentheses after each impact topic. Refer to the end of the Checklist for a listing of the Supporting Information Sources.

I. AESTHETICS

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista? (1,2)	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (2)	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings? (2)	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (2)	☐	☐	☒	☐

DISCUSSION OF POTENTIAL IMPACTS

a) The project area is located within the Dry Creek Valley, which is identified as a Scenic Landscape Unit in the Sonoma County General Plan 2020. The project area would be visible from Lambert Bridge Road which crosses through the middle of the project area. Portions of the project area may also be visible from Dry Creek Road and West Dry Creek Road. There would be a short-term visual impact associated with construction activities. Project activities, such as dewatering and bypass flow pumping, stockpiling of materials, removal of vegetation, excavation of the backwater/alcove areas, and placement of boulder and log structures, may be considered an aesthetic impact by some people. These construction activities would be clearly visible from Lambert Bridge Road. Some of the construction activities may also be visible from Dry Creek Road and West Dry Creek Road in the project area. Initially after construction, the project area will exhibit signs of being recently disturbed. However, visible portion of the structures built will be natural materials (logs/boulders) that have been designed to be naturally functioning and appearing stream features. These newly placed rocks and log structures and areas that have had vegetation removed would initially be clearly visible. However, within a year, once the project site has gone through winter high flows and a spring growing season, debris deposited by creek flows and new vegetative growth is expected to blend these newly constructed features with existing creek features. Therefore no long-term aesthetic impacts are expected as a result of the project.

b) Please refer to Item I a). The proposed project would not result in any long-term damage of scenic resources.

c) Please refer to Item I a). The proposed project would not result in any long-term degradation of the project area.

d) Lighting will likely be required during the construction phase of the project. Bypass pumping during construction could occur on a 24-hour basis while the project site is de-watered. An operator would be required on site at all times to maintain the pumping equipment while flows are being bypassed. For safety purposes, portable lighting would be brought in to light the work area during nighttime hours. All lighting would be removed at the completion of construction. There would be no permanent lighting associated with features proposed. Construction of the proposed project would not create new sources of light or glare.

II. AGRICULTURAL AND FOREST RESOURCES

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

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (3)	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract? (2)	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (2)	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use? (2)	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project will not result in the conversion of any farmlands to other uses. The California Department of Conservation designates the entire project area as Prime Farmland. Prime Farmland is defined as having the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmlands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. The entire project area is located within the active flow area of the Dry Creek channel. None of the proposed enhancement areas are under agricultural production. Because the bank stabilization sites will require that the existing bank be excavated out and rebuilt, this may require encroachment during construction into adjacent vineyard areas. While this may impact some vineyard land during construction, the long-term

effect to the bank stabilization work would be to protect the vineyard land from future losses as a result of continued erosion that would occur without the bank stabilization.

b) The proposed project will not result in the conversion of any farmlands to other uses or require the cancellation of any existing Williamson Act Contracts. One potential conflict that could occur is due to the fact that the proposed project would need to be constructed during the summer and fall (generally between June 15th and October 15th). There is a potential for construction activities to conflict with harvest activities because the construction time period overlaps with when grapes from the vineyards are harvested and because road access in the vineyard areas is limited. Construction coordination and road use would need to be coordinated with the landowners and vineyard managers in order to avoid potential conflicts.

c) The proposed project is located within the riparian zone of Dry Creek with vineyard, wineries, and residential land uses adjacent to the riparian corridor. No timber harvest activities are occurring or expected to occur within the project area,

d) The proposed project is located within the riparian zone of Dry Creek with vineyard, wineries, and residential land uses adjacent to the riparian corridor. No timber harvest activities are occurring or expected to occur within the project area,

e) The proposed project would not result in a change in existing land use.

III. AIR QUALITY

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

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan? (2)	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (4,5)	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? (2,4)	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations? (2,4)	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project is not anticipated to conflict with any air quality plan.

b) The project site is within the boundaries of the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NSCAPCD is primarily rural and mountainous, and contains only two urbanized areas (Healdsburg and Cloverdale). According to the State of California Air Resources Board, based on 2006 to 2008 air quality monitoring, the NSCAPCD area is in attainment for the State Particulate Matter (PM10) standard. PM10 is dust less than 10 microns in diameter. Fugitive dust is a source of particulate matter emissions. Dust generation during restoration activities is anticipated to be minimal, principally because the soils that would be moved would have a high moisture content due to their proximity to the creek. The proposed project is also located in an agricultural and rural residential area and is not anticipated to result in any air quality violations. The following measures are included to minimize fugitive dust generation during restoration activities.

Mitigation Measure DCHED-1*: The project specifications will require the contractor to comply with the dust control provisions of the Sonoma County Water Agency's Standard Contract Documents and the Northern Sonoma County Air Pollution Control District's Rule 430 that regulate fugitive dust emissions. Measures to reduce dust emissions may include, but are not limited to: sprinkling unpaved construction areas with water; covering trucks hauling dirt; limiting dust*

generating activities during periods of high winds (greater than 15 miles per hour); replacing ground cover in disturbed areas as soon as possible; enclosing, covering, watering, or applying soil binders to exposed stock piles; removing earth tracked onto neighboring paved roads at least once daily; and limiting equipment speed to 10 miles per hour in unpaved areas.

Mitigation Measure DCHED-2: *The project specifications will require that all construction vehicles and equipment emission levels meet current air quality standards and that idling time for all heavy equipment be minimized to reduce on-site emissions.*

c) Please refer to Item III b).

d) Please refer to Item III b).

e) No objectionable odors would result from restoration activities proposed for the project.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (2)	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (2)	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, including, but not limited to, marsh, vernal pool, coastal, through direct removal, filling, hydrological interruption, or other means? (2)	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (2)	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (2)	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional, or state habitat conservation plan? (2,6,7)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The project area currently provides limited rearing habitat for salmonids, in particular for the federal Endangered Species Act listed as endangered coho salmon. The project is a requirement of the Reasonable and Prudent Alternatives of an Endangered Species Act Section 7 Biological Opinion issued by the National Marine Fisheries Service in 2008. The purpose of the proposed project is to restore rearing habitat by increasing shelter and moderating flow conditions in Dry Creek. The proposed habitat changes are also expected to benefit the federally listed as threatened Chinook salmon and the federally and California Endangered Species Act listed threatened steelhead, which are known to occur in the project area.

Construction in or near the streambed is scheduled for the months of June through October during summer low-flows. All flows in Dry Creek (approximately 100 to 120 cfs) would need to be diverted around the construction work area. Work areas would be isolated from the moving stream using some type of imported barrier or

material (water filled bladders, gravel cofferdams, sheetpile cofferdams, etc.). Typically, the work area would be isolated and the creek flow would be allowed to continue flowing adjacent to the isolated work area. In some cases it may be necessary to completely isolate the creek from bank to bank. In this case, bypass pumping from the upstream end of the work area to the downstream end of the work area would occur to bypass creek flows around the work area. The bypass pumping would result in the work area being dewatered during construction and remain unavailable to fish for the duration of construction. There is potential for upstream migrating adult Chinook salmon to be present within the project area during these months. Juvenile steelhead, coho salmon, and Chinook salmon could potentially be present within the project area during these months. Special-status fish species including hardhead and Pacific lamprey, as well as any other resident fish species, could also be present during the construction period. Dewatering would require installation of cofferdams upstream and downstream of the project site, diverting stream flow around the project site, and removing fish from within the project site. The following mitigation measure is incorporated into the project to minimize impacts to special status fish species as a result of temporary loss of habitat availability during construction activities through the removal of fish species to appropriate habitat outside of the project site.

Mitigation Measure DCHED-3: *During dewatering activities, fish located within the project site would be removed and relocated to appropriate habitat downstream of the project site. Qualified fisheries biologists, using methods approved by the National Marine Fisheries Service and California Department of Fish and Game, would perform the fish rescue and relocation.*

The project site provides potential habitat for foothill yellow-legged frog and northwestern pond turtle. Construction activities would result in temporary loss of habitat availability within the project site. The following mitigation measure is incorporated into the project to reduce impacts to foothill yellow-legged frog and northwestern pond turtle habitat to less than significant.

Mitigation Measure DCHED-4: *Prior to beginning construction activities, pre-construction surveys will be performed within the project site. Should foothill yellow-legged frog or northwestern pond turtle be found within the construction area, individuals will be relocated by a qualified biologist to an area of appropriate habitat outside of the construction area.*

Removal of existing riparian habitat within the project site would reduce available breeding and foraging habitat for special-status bird species such as lark sparrow, osprey, yellow warbler, yellow-breasted chat, and Pacific-slope flycatcher. Planting of recontoured banks would reestablish riparian habitat within the project site and in some cases would provide new riparian habitat in portions of the project site where such habitat currently does not exist. The construction schedule would likely avoid impacts to breeding activities of these species. However, should construction activities begin in July, the following measure would be implemented to reduce the impact to less than significant.

Mitigation Measure DCHED-5: *Prior to beginning construction activities, pre-construction surveys will be performed within the project site to determine the presence of special status species nests. If special status species nests are encountered within the project site, a nest protection zone of 500 feet for raptors and 50 feet for other birds will be defined, and physical barriers such as fencing will be installed to prevent construction equipment from disturbing the nest. Nests will be monitored weekly during construction activities, and protection measures or construction activities will be modified as necessary.*

Foraging habitat for special status species such as hermit warbler, loggerhead shrike, merlin, fringed myotis, long-eared myotis, long-legged myotis, Yuma myotis, Pacific western big-eared bat, pallid bat, and pale big-eared bat would be temporarily impacted during construction activities. The temporary impact would be less than significant as appropriate foraging habitat is available upstream and downstream of the project site. Habitat enhancement work associated with the project would also restore foraging habitat to the site.

b) Habitat enhancement work, including bank recontouring, installation of log and boulder structures, and vegetation management throughout the project site, would require removal of existing riparian vegetation. Riparian trees and shrubs dominate vegetated sections of stream banks within the project site. Replanting of native riparian trees and shrubs in specific locations, such as at bank stabilization sites, is a component of the proposed project. The following measure is included to reduce potential impacts to less than significant.

Mitigation Measure DCHED-6: *The Water Agency will prepare and implement a revegetation plan to mitigate the loss of native riparian vegetation. Recontoured banks will be seeded and revegetated. Erosion control fabric will be placed on all exposed banks to prevent erosion. Plant species selected for revegetation will be based upon surveys of riparian habitat along Dry Creek upstream and downstream of the project site. Planting requirements in the revegetation plan will be based upon species composition and density recommendations associated with the overall habitat enhancement design for the project. The final revegetation plan will include details regarding planting, implementation, maintenance, and monitoring.*

c) The proposed project is a restoration project intended to improve aquatic habitat and water quality within the project site. For work proposed within Dry Creek, the Water Agency will apply for an Individual Permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, a water quality certification from the North Coast Regional Water Quality Control Board under Section 401 of the Clean Water Act, and a Streambed Alteration Permit from the California Department of Fish and Game under Section 1600 of the California Fish and Game Code. The total amount of existing Corps of Engineers jurisdictional area within the project area is 19.4 acres (6.8 acres of open water area and 12.6 acres of vegetated wetland areas within the OHW). The project would require work and fill material within Corps jurisdictional areas; however, the habitat enhancement project is anticipated to result in a net increase in the total Corps jurisdictional

area to 20.4 acres (9.4 acres of open water area and 11 acres of vegetated wetland areas within the OHW). The proposed project does not require mitigation for impacts to wetlands, as the proposed activities are anticipated to improve the quality and increase the acreage of waters of the United States within the project site. No substantial adverse effects to wetlands or other waters of the United States are anticipated to result from the proposed project.

d) Construction activities would temporarily restrict fish movements into the project site. Cofferdams would be located at the upstream and downstream ends of the project site that would restrict fish passage into the project site. Chinook salmon have the potential to be present in the project area; however, the proposed construction period is in the early portion of the Chinook salmon run in Dry Creek and instream work would be complete before the peak migration period. This temporary impact is considered less than significant because the restriction is temporary, would not occur during a critical life stage for passage, and the fish habitat in the project area is anticipated to improve as a result of the project. Construction activities would temporarily restrict wildlife movements through the project site. This impact will be temporary (June-October) and is limited to the project site. The impact is considered less than significant because alternative corridors would be available during construction activities.

e) The proposed project would not conflict with any local policies or ordinances protecting biological resources.

f) The proposed project would not conflict with any Habitat Conservation, Natural Community Conservation, or any other conservation plans within the project area. The project would support the goals of the NMFS's *Recovery Plan for the Evolutionary Significant Unit of Central California Coast Coho Salmon* and the California Department of Fish and Game's *Recovery Strategy for California Coho Salmon*.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5? (8)	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5? (8)	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (8)	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries? (8)	☐	☒	☐	☐

DISCUSSION OF POTENTIAL IMPACTS

a) An archaeological investigation of the project site did not identify any cultural resources within the project area. The Lambert Bridge was identified as a historical resource within the project area. The project does not involve any changes or modifications to Lambert Bridge. Therefore, the project is not anticipated to have an adverse effect to historical or archaeological resources. However, excavation during project construction has the potential to expose and affect subsurface cultural resources that were not visible and identified during cultural resource field survey for the project. The potential for impacts to potential unknown cultural resources in the project area would be less than significant with incorporation of the following mitigation measure.

Mitigation Measure DCHED-7: *The project specifications will require the contractor to comply with the Sonoma County Water Agency's Standard Contract Documents regarding the discovery of cultural resources. The Water Agency Construction Inspector and construction personnel will be notified of the possibility of encountering archaeological materials during project construction. The project specifications will provide that if discovery is made of items of historical, archaeological or paleontological interest, the contractor will immediately cease all work activities in the area of discovery. Archaeological indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, human bones, and fossils. After cessation of excavation, the contractor will immediately contact the Water Agency's Construction Inspector. The contractor will not resume work until authorization is received from the Construction Inspector. If archaeological indicators are discovered during construction, the Water Agency will retain the services of a qualified professional archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site. If it is determined that the find is unique and/or potentially eligible for listing in the California Register, and the site cannot be avoided, an archaeologist shall provide a research design and*

excavation plan outlining recovery of the resource, analysis, and reporting of the find. The research design and excavation plan will be submitted to the Water Agency's Construction Inspection Section and approved by the Water Agency prior to construction being resumed.

b) Please refer to Item V a).

c) No unique paleontological resources or unique geologic features were identified within the project site.

d) No human remains have been identified within the project site. Please refer to Item V a).

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (2, 9)	☐	☐	☒	☐
2) Strong seismic ground shaking? (2,9)	☐	☐	☒	☐
3) Seismic-related ground failure, including liquefaction? (2,9)	☐	☐	☒	☐
4) Landslides? (2)	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil? (2)	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (2)	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (10)	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a1) Regional geologic mapping show several strands of the Healdsburg fault within and immediately adjacent to the Dry Creek drainage. The project consists of habitat modifications along an existing stream. The project would not result in the construction of buildings or other occupied structures. Construction of the proposed project would not expose people or property to risks associated with potential fault rupture greater than those that exist under present conditions, therefore the impact is considered less than significant.

a2) Please refer to Item a1 above. Construction of the proposed project would not expose people or property to risks associated with potential fault rupture greater than those that exist under present conditions, therefore the impact is considered less than significant.

a3) Please refer to Item a1 above. Construction of the proposed project would not expose people or property to risks associated with potential seismic-related ground failure, including liquefaction, greater than those that exist under present conditions, therefore the impact is considered less than significant.

a4) The project is located in a valley, which is relatively more stable than surrounding hillsides. Construction of the proposed project would not expose people or property to risks associated with potential landslides greater than those that exist under present conditions, therefore the impact is considered less than significant.

b) The proposed project is a restoration project intended to improve aquatic habitat and water quality within the project site. The project would reduce soil erosion into Dry Creek during high flows. Stabilized stream bank areas would reduce the loss of streambanks and adjacent agricultural lands. All areas above the low-flow water line that are disrupted by construction activities will be protected from erosion through the use of seeding/revegetation and/or protected with erosion control fabric to minimize erosion potential. Therefore, the impact is considered less than significant.

c) The project site is located in an area that is alluvial material and saturated due to the year-round flows in the creek. It is indicated as being subject to liquefaction potential in the Sonoma County General Plan 2020. However, as noted above in a3 and a4, construction of the proposed project would not expose people or property to risks associated with potential seismic-related ground failure, including liquefaction, or failure due to landslides, greater than those that exist under present conditions. It is not anticipated that the project area would result in the area becoming unstable or result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, therefore the impact is less than significant.

d) The project site is primarily on soils classified as Riverwash with adjacent lands outside of the creek primarily part of the Yolo soils series. Riverwash materials consist of very recent depositions of gravel, sand, and silt alluvium. Yolo series soils consist of well-drained loams underlain by recent alluvium. Shrink-swell potential is a description of the extent to which a soil type shrinks as it dries out or swells when it gets wet. Extent of shrinking and swelling is influenced by the amount and kind of clay in the soil. Shrinking and swelling of soils causes much damage to building foundations, roads and other structures. The soil types in the project area have low levels of clay and therefore have correspondingly low shrink-swell potential. In addition, the types of structures proposed would not be subject to damage even if minor amounts of shrinking and swelling were to occur. The proposed project would not create substantial risks to life or property as a result of construction on expansive soils, therefore the impact is less than significant.

e) The proposed project would not include septic tanks or alternative wastewater disposal systems.

VII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (2)	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) Construction activities would require equipment such as vehicles and generators that would generate greenhouse gas emissions. Periodic monitoring and maintenance activities would also require additional vehicle trips which would generate greenhouse gas emissions. Vehicle trips associated with construction, monitoring, and maintenance activities is not anticipated to result in a substantial increase in traffic in the Dry Creek corridor. The project itself would not generate any greenhouse gas emissions. Given the limited and temporary nature of the greenhouse gas emission sources associated with the project, significant emissions, either directly or indirectly, of greenhouse gases is not anticipated as a result of the proposed project

b) Being the largest energy user in Sonoma County, in 2006, the Water Agency committed to the goal of operating a carbon free water system by 2015. To achieve this goal, the Water Agency is actively working to diversify its energy portfolio and reduce its energy and fuel needs through efficiency and renewable energy production. Through this effort the Water Agency is helping to pioneer new technologies that have been carefully evaluated for economic viability. The proposed project would not negatively conflict with any of the Water Agency's efficiency and renewable energy production programs. The proposed project is not anticipated to conflict with any other applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal, of hazardous materials? (2)	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (2,11)	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (2)	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (2,11)	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (2)	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (2)	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (2)	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project would require the occasional transport of vehicles, construction equipment, and construction materials that use hazardous materials (e.g. motor oil, gasoline), but will not include the routine transport or disposal of hazardous materials. Therefore, the impact is considered less than significant.

b) A Preliminary Hazard Waste Assessment that included the project area was conducted in 2010. The Preliminary Hazardous Waste Assessment identified two wineries within the project boundaries that are active industrial facilities that treat and/or dispose of winery wastes generated from onsite operations. These ongoing stormwater/wastewater management issues associated with existing winery operations are not expected to be impacted by the proposed project. No

other known or suspected hazardous materials sites were identified within the project area. Construction of the project would require the use of vehicles and equipment that may have a slight potential for accidentally spilling oil or fuel. Accidental release of any hazardous materials (e.g. motor oil, gasoline) would not create a significant hazard to the public or environment because the project is located in a sparsely populated area, the quantity and toxicity of materials that could be released would be low, best management practices would be employed to prevent a spill from occurring, and the project site would be isolated by cofferdams from upstream and downstream sections of Dry Creek. Therefore, the construction of the proposed project would not create a significant hazard to the public or environment. However, the following mitigation measure is included to reduce the impact further.

Mitigation Measure DCHED-8: *The project specifications will require the contractor to comply with the Sonoma County Water Agency's Standard Contract Documents to protect the project area from being contaminated by the accidental release of any hazardous materials and/or wastes. Disposal of all hazardous materials will be in compliance with all current hazardous waste disposal laws. The construction contractor will contact the local fire agency and the Sonoma County Department of Environmental Health for any site-specific requirements regarding hazardous materials or hazardous waste containment or handling.*

Mitigation Measure DCHED-9: *The project specifications will require the contractor to prepare a Safety Plan in accordance with the Sonoma County Water Agency's Standard Contract Documents. If hazardous materials are encountered during construction activities, the contractor will be required to halt construction immediately and notify the Water Agency's Construction Inspection Section. Disposal of all hazardous materials will be in compliance with all applicable hazardous waste disposal laws.*

c) As noted above in Item VII a) and b), the potential for release of hazardous materials is low and limited to only during construction. In addition, the nearest existing or proposed school is over 3 miles southeast of the project site. Therefore, no impact to an existing or proposed public school within one-quarter mile of the project site is expected.

d) Please refer to the Item VII b) above.

e) The project site is approximately 1.5 miles west of the Healdsburg Municipal Airport. The project would not alter existing elevations or involve the construction of any structures that might interfere with airport operations.

f) The project site is not located near a private airstrip.

g) The proposed project is located on private property and would not interfere with an adopted emergency response plan or emergency evacuation plan.

h) The project site is located in an area of mixed agricultural and residential uses adjacent to wildlands. The proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires beyond the risks that currently exist in the vicinity of the project area.

IX. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements? (2)	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (2)	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on- or off-site? (2)	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (2)	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (2)	☐	☐	☐	☒
f) Otherwise substantially degrade water quality? (2)	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (2)	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (12)	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (2,12)	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project would require installation of cofferdams, diverting flows around the project site, dewatering the project area, and earthwork within the bed and bank of a creek. These activities have the potential to violate water quality or waste discharge requirements. Construction of the project would require a water quality certification from the California Regional Water Quality Control Board, North Coast Region, under Section 401 of the Clean Water Act associated with the placement of fill within waters of the United States. The

Water Agency will submit a dewatering plan and stormwater pollution control plan to the California Regional Water Quality Control Board, North Coast Region for their approval prior to commencing construction.

b) The proposed project could require diverting flows around portions of the project site during construction. This short-term diversion of flows around the work area is not anticipated to deplete groundwater supplies or interfere with groundwater recharge because of the limited distance of the proposed diversion area and underflow through the gravels beneath the work area would likely still occur. Proposed biotechnical channel adjustments (raising of the streambed and placement of cross vane weirs) would use rock that would not affect groundwater recharge along the river.

c) The proposed project is a restoration project intended to improve aquatic habitat and water quality within the project site. Streambank stabilization aspects of the project would reduce soil erosion into Dry Creek. The project would result in backwater and side channel areas along Dry Creek where flow velocities would be lower to enhance fisheries habitat; however, the overall drainage pattern through the project area would remain the same.

d) Refer to the Items VIII a, b, and c above. The proposed project is a restoration project intended to improve aquatic habitat and water quality within the project site. It would not substantially change the existing drainage pattern of the site or area or result in flooding on- or off-site.

e) The proposed project would not affect stormwater drainage systems or water quality because the proposed project would not create additional runoff water or provide an additional source of polluted runoff.

f) The proposed project is a restoration project intended to improve aquatic habitat within the project site. The proposed project would not degrade water quality because construction in or near the streambed is scheduled for months (June-October) when there would be minimal surface flow. The project site would be dewatered during construction. Dewatering would require installation of cofferdams and project construction would comply with applicable requirements of the California State Regional Water Quality Control Board, North Coast Region. The proposed project would reduce contribution of sediment into Dry Creek through stabilization and revegetating eroding streambanks.

g) The proposed project would not include the construction of housing.

h) Existing hydraulic patterns and proposed changes in the creek bed were assessed using the United States Army Corps of Engineers Hydraulic Engineering Center River Analysis System (HEC-RAS). HEC-RAS is a computer program that models the hydraulics of water flow through natural rivers and other channels. The HEC-RAS modeling indicates that 100-year flood water surface profiles would be similar between existing and proposed conditions, though slight increases are predicted in select locations, primarily in areas adjacent to proposed riffle construction. For the 100-year flood flow, increases in water surface profile range from 0 to 1.1 feet, although the flood waters are still predicted to be contained in the creek

corridor. Therefore, the proposed project would not impede or redirect flood flows within the project area. The one hundred year flood flow was used as a standard Base Flood as used by the Federal Emergency Management Agency (FEMA) in their flood insurance programs. A one hundred year flood is a storm event that has a one-in-one hundred chance of occurring in any year.

i) Please refer to Item VIII h). The proposed project would include placement of rock and logs within the stream channel area of Dry Creek. The project design anticipates the potential winter high flow events. The design intention is to have the boulder and log structures anchored so that they do not become mobilized and moved downstream during high flow events. There is always the potential that any habitat enhancement structures or portions of structures placed within the active channel area can fail and move downstream. The concern with debris moving downstream is that it can hang up somewhere else down the channel and cause water to back up or erode channels in an unexpected manner. However, this is a potential issue that also exists for the existing riparian vegetation along Dry Creek. The proposed project is not anticipated to substantially increase the risk of debris being mobilized and moved downstream during high flow events. Monitoring of the project site for at least five years after construction is planned as part of project implementation. One component of post-project monitoring would be to evaluate the durability of the structures. Construction of the proposed project would not expose people or structures to risks involving flooding, including failure of a levee or dam, greater than those that exist under present conditions, therefore, the impact is considered less than significant.

j) The proposed project is not located in an area subject to inundation by seiche, tsunami, or mudflow.

X. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community? (2)	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance)? (2)	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project would not physically divide or otherwise alter an established community.

b) The project site is located in an area zoned for agricultural lands and rural residential uses. The proposed project would not change the existing land use of the project site or adjacent land uses.

c) Please refer to Item IV f).

XI. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (2)	☐	☐	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) No gravel mining operations are currently operating within Dry Creek, although gravel mining has occurred in the past. The proposed project is not anticipated to result in a loss of availability of any known mineral resources. The proposed project would rely on the continued natural movement of gravel and sediment through the project area during high flows. The structures may induce scour in some locations and enhance deposition of bedload in other areas. However, the ability for Dry Creek to move alluvial materials is not expected to change significantly and high flows through the structures would allow for deposition and resuspension of gravels, so bedload movement would not be significantly inhibited. Construction would also occur during the summer low-flow period when bedload movement in Dry Creek is not occurring in any significant manner. The temporary diversion of flows around the work area during the summer low-flow period would not impact sediment bedload transport in Dry Creek. Therefore, the impact is less than significant.

b) There are no known locally-important mineral resource recovery sites within the project vicinity.

XII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies? (2,13)	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (2)	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (2)	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (2)	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (2)	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) Construction of the proposed project would result in a temporary increase in noise associated with construction activities. Due to the nature of having to divert stream flow in order to construct the project, construction activities could occur on a 24-hour basis in order to limit the time that doversion of stream flows is required. There are residences adjacent to the project site that could be exposed to increased noise levels during construction activities; however, the overall project area setting is an agricultural setting. Existing noise-generating agricultural activities can and do occur at various hours over a 24-hour period depending upon needs (e.g. harvest, frost protection activities). The proposed construction activities would be te,porary during the construction period and would not represent a significant new source of noise in the project area. Future maintenance activities would occur during regular daytime work hours (weekdays, 8:00 a.m. to 5:00 p.m.).

b) Please refer to Item XI a).

c) The proposed project would not result in any permanent increase in ambient noise levels.

d) Construction of the proposed project would result in a temporary increase in noise associated with the operation of construction vehicles and equipment. Construction of the project would not result in substantial temporary or periodic

increases in ambient noise levels above levels existing without the project because the project is located in an agricultural area subject to temporary and periodic increases in noise levels as a result of farm equipment operations. Therefore, the impact is less than significant.

e) The proposed project site is approximately 1.5 miles from the Healdsburg Municipal Airport; however, the Healsburg Municipal Airport does not generate a significant amount of noise in the project area. In addition, since the project does not consist of the construction of any new homes or work locations, the project does not consist of any components that would result in placing new sensitive receptors in the project area.

f) The proposed project is not located within the vicinity of a private airstrip.

XIII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (2)	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (2)	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project would not directly or indirectly induce population growth in the area because no new homes and businesses are proposed. The proposed project would not require extension of roads or other infrastructure.

b) The proposed project would not displace housing because no homes exist within the project site.

c) The proposed project would not displace people because there are no inhabitants within the project site.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in: 1) substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; or 2) the need for new or physically altered governmental facilities, of which the construction could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
1) Fire protection? (2)	☐	☐	☐	☒
2) Police protection? (2)	☐	☐	☐	☒
3) Schools? (2)	☐	☐	☐	☒
4) Parks? (2)	☐	☐	☐	☒
5) Other public facilities? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a1) The proposed project would not require alteration of existing or construction of new governmental facilities, including fire protection.

a2) The proposed project would not require alteration of existing or construction of new governmental facilities, including police protection.

a3) The proposed project would not require alteration of existing or construction of new governmental facilities, including schools.

a4) The proposed project would not require alteration of existing or construction of new governmental facilities, including parks.

a5) The proposed project would not require alteration of existing or construction of new public facilities.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (2)	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) There are no parks or other recreational facilities located within the project site. The proposed project would not impact parks or other recreational facilities.

b) The proposed project does not include the construction or expansion of recreation facilities.

XVI. TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (2,14)	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (2)	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (2)	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (2)	☐	☐	☐	☒
e) Result in inadequate emergency access? (2)	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) Construction vehicles may cause a short-term delay of traffic along Lambert Bridge Road, and possibly Dry Creek Road and West Dry Creek Road, as vehicles enter and exit the project site, but it is not anticipated that the project would substantially increase traffic or cause traffic congestion in relation to the capacity of the road. Lambert Bridge Road and West Dry Creek Road are designated as Rural Minor Collectors. Dry Creek Road is designated as a Rural Major Collector. Traffic control would be implemented by the construction contractor if necessary to allow the passage of construction vehicles and the delivery of materials to the site.

b) Construction vehicle traffic is expected to temporarily increase by approximately 45 vehicle trips per day. Vehicles traveling to and from the site during project construction would not exceed, either individually or cumulatively, the level of service standard for Dry Creek Road. The increase in vehicle traffic would be temporary and would primarily be concentrated over a few months during the

construction period. Therefore, the temporary impact would be less than significant.

c) The proposed project does not include air transportation and would not affect air traffic patterns.

d) The proposed project would not change any road design or cause any road obstructions.

e) The proposed project would not change emergency access from the existing conditions.

f) The proposed project would not conflict with alternative transportation policies, plans, or programs. The proposed project would be located on private property. There is adequate room to stage construction vehicles, equipment, and materials. No off-site parking would be necessary.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (2)	☐	☐	☐	☒
b) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (2)	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (2)	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (2)	☐	☐	☐	☒
e) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (2)	☐	☐	☐	☒
f) Comply with federal, state, and local statutes and regulations related to solid waste? (2)	☐	☐	☐	☒
g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project would not require or result in the construction or expansion of wastewater treatment facilities.

b) The proposed project would not require wastewater treatment.

c) The proposed project would not require wastewater treatment.

d) The proposed project would not require new potable water supplies.

e) The proposed project would not require or result in the construction or expansion of stormwater drainage features.

f) Excess soil and construction debris would be disposed at a nearby landfill or an appropriate recycling facility.

g) The proposed project would require the disposal of construction-related debris and soil. The quantity of solid waste is not expected to substantially affect the capacity of the landfill. In addition, all materials that can be recycled (e.g. metal, concrete) would be taken to appropriate recycling facilities.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (2)	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (2)	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (2)	☐	☐	☐	☒

DISCUSSION OF POTENTIAL IMPACTS

a) The proposed project is a habitat enhancement project designed specifically to improve the quality of habitat in Dry Creek for rare and threatened fish populations. An archaeological investigation of the project area did not identify any known cultural resources within the project area. The proposed project does not have potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history.

b) The proposed project does not have impacts that are individually limited, but cumulatively considerable. This project is an initial demonstration project along a one mile section of Dry Creek. If the demonstration project shows that habitat enhancement is feasible and effective for increasing habitat in Dry Creek for coho, Chinook, and steelhead, then an additional 5 miles of Dry Creek habitat would undergo similar habitat enhancement. Additional environmental documentation would be prepared for this additional habitat enhancement. The intent is that the demonstration project along with future habitat enhancement projects in Dry Creek would be cumulatively beneficial for rare and threatened fish populations in Dry Creek.

c) The proposed project does not have environmental effects that would cause substantial adverse effects on human beings.

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

Signature: _____ Date: 5/24/11

for Grant Davis - General Manager

SUPPORTING INFORMATION SOURCES

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2. Professional observations and judgment of the document preparer and other Water Agency staff.
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4. California Air Resources Board. 2010 State Area Designation Maps. http://www.arb.ca.gov/desig/adm/adm.htm
5. Northern Sonoma County Air Pollution Control District – Rule 430 –Fugitive Dust Emissions. http://www.arb.ca.gov/DRDB/NSC/CURHTML/R1-4-430.HTM
6. National Marine Fisheries Service. Mendocino County Planning Department. *Recovery Plan for the Evolutionary Significant Unit of Central California Coast Coho Salmon.* Draft -March 2010.
7. California Department of Fish and Game. *Recovery Strategy For California Coho Salmon*. February 2004.
8. Del Bondio, Lauren and Thomas M. Origer, M.A./R.P.A *An Archaeological Survey for the Dry Creek Habitat Enhancement Demonstration Project. Sonoma County, California.* December 23, 2010.
9. Inter-Fluve. *Current Conditions Inventory Report Dry Creek: Warm Springs Dam to Russian River, Sonoma County, CA.* Draft- March 2010.
10. United States Department of Agriculture. Soil Survey – Sonoma County California. 1972.
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12. Inter-Fluve. *60% Complete Design Report – Dry Creek Habitat Enhancement Demonstration Projects: River Miles 6.2 to 7.3. Sonoma County, CA*. Draft- October 1, 2010.
13. County of Sonoma Permit and Resource Management Department. *Sonoma County General Plan 2020*. *Noise Element*. 2008.
14. County of Sonoma Permit and Resource Management Department. *Sonoma County General Plan 2020*. Figure CT-4c - Roadway Classifications. 2008.