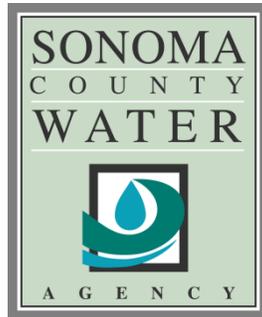


INITIAL STUDY
AND
MITIGATED NEGATIVE DECLARATION
OF ENVIRONMENTAL IMPACT

MIRABEL FISH LADDER AND FISH SCREEN REPLACEMENT PROJECT

November 21, 2012

Lead Agency:
SONOMA COUNTY WATER AGENCY
404 Aviation Boulevard
Santa Rosa, CA 95403



Prepared By:

David Cuneo
Senior Environmental Specialist
(707) 547-1935
Sonoma County Water Agency

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TABLE OF CONTENTS

PROJECT TITLE	1
INTRODUCTION	1
PROJECT BACKGROUND	2
PROJECT OBJECTIVE	7
PROJECT LOCATION	7
PROJECT DESCRIPTION	8
POTENTIAL IMPACT PERIODS	11
PROJECT ALTERNATIVES	15
NOTICE OF PREPARATION AND SUMMARY OF COMMENTS	19
ENVIRONMENTAL SETTING	20
LAND USE AND CONFORMANCE WITH GENERAL PLAN	25
CUMULATIVE EFFECTS	25
RIGHT-OF-WAY	26
ENVIRONMENTAL EVALUATION AND MITIGATION MONITORING	26
JURISDICTIONAL/PERMITTING AGENCIES	26
FINDING	27
SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED	27
ENVIRONMENTAL CHECKLIST	27
I. AESTHETICS	29
II. AGRICULTURAL AND FOREST RESOURCES	31
III. AIR QUALITY	33
IV. BIOLOGICAL RESOURCES	35
V. CULTURAL RESOURCES	40
VI. GEOLOGY AND SOILS	42
VII. GREENHOUSE GAS EMISSIONS	45
VIII. HAZARDS AND HAZARDOUS MATERIALS	47
IX. HYDROLOGY AND WATER QUALITY	49
X. LAND USE AND PLANNING	52
XI. MINERAL RESOURCES	53
XII. NOISE	54
XIII. POPULATION AND HOUSING	56
XIV. PUBLIC SERVICES	57
XV. RECREATION	58
XVI. TRANSPORTATION/TRAFFIC	59
XVII. UTILITIES AND SERVICE SYSTEMS	61
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE	62
DETERMINATION	63
SUPPORTING INFORMATION SOURCES	64

FIGURES

Figure 1. Regional Location Map	4
Figure 2. USGS Quad Map	5
Figure 3. Mirabel-Wohler Area	8
Figure 4. Fish Screen and Fish Ladder Plan View	9
Figure 5. Fish Screen and Fish Ladder Conceptual View	9
Figure 6. Fish Screen and Fish Ladder - Work Area	12

PHOTOS

Photo 1. Mirabel Dam	6
Photo 2. Existing Mirabel Fish Ladder and Fish Screen/Intake Structure	6
Photo 3. Mirabel Dam With Notch	7
Photo 4. Existing Sheet Pile Channel	12
Photo 5. Temporary Cofferdam Example	13

Photo 6. Seasonal Dam Fish Ladder Example 14

APPENDICES

- A. Mirabel Fish Screen Reconfiguration Feasibility and Alternatives Study
- B. Notice of Preparation and Comment Letters Received
- C. Special Status Species Potentially Occurring Within the Mirabel Fish Ladder and Fish Screen Replacement Project
 - B-1. Special Status Plant Species Potentially Occurring Within the Mirabel Fish Ladder and Fish Screen Replacement Project
 - B-2. Special Status Wildlife and Fish Species Potentially Occurring Within the Mirabel Fish Ladder and Fish Screen Replacement Project
- D. Plant Species Observed Within the Mirabel Fish Ladder and Fish Screen Replacement Project
- E. Mirabel Fish Ladder and Fish Screen Replacement Project Draft Mitigation Monitoring Plan

PROJECT TITLE

This Initial Study and Mitigated Negative Declaration has been prepared by the Sonoma County Water Agency (Water Agency) for the **Mirabel Fish Screen and Fish Ladder Replacement 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. Based on the analysis contained herein, the Water Agency has determined that all project impacts can be mitigated to a level considered less than significant. Accordingly, adoption of this Initial Study/Mitigated Negative Declaration (IS/MND) is appropriate and satisfies the requirements of CEQA.

This IS/MND for the Mirabel Fish Screen and Fish Ladder Replacement Project was prepared in accordance with the provisions of the CEQA, the State CEQA Guidelines, and the Water Agency's *Procedures for the Implementation of CEQA*. The Water Agency is the Lead Agency pursuant to CEQA, and will consider all comments received in response to this IS/MND, including comments from responsible and trustee agencies, property owners, and interested parties regarding the scope and content of the information included in this IS/MND. After completion of the public review period for this document, this IS/MND, along with a summary of comments submitted and the Water Agency's responses to those comments, will be brought before the Water Agency's Board of Directors for their consideration.

The replacement of the Mirabel fish screen portion of the project is required by the National Marine Fisheries Service's (NMFS) 2008 *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). The replacement of one of the existing fish ladder's with a vertical-slot fish ladder, which will also include the addition of a viewing chamber to enhance educational opportunities, is not required under the Russian River Biological Opinion; however, the new fish ladder and viewing opportunities will be designed to complement and enhance the fish screen project.

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.

The Russian River originates in central Mendocino County approximately 15 miles north of Ukiah. The Russian River watershed drains an area of approximately 1,485 square miles, including much of Mendocino and Sonoma counties, and empties into the Pacific Ocean at Jenner in Sonoma County, about 20 miles west of Santa Rosa (Figure 1). The main channel of the Russian River is about 110 miles long and runs generally southward from its headwaters near Redwood and Potter Valleys, to Mirabel Park, where the channel's direction changes to generally westward as it crosses the Coast Range. Principal Russian River tributaries are the East Fork of the Russian River (which receives water diverted from the Eel River through Pacific Gas and Electric Company's (PG&E) Potter Valley Project, Big Sulphur Creek, Maacama Creek, Dry Creek, and Mark West Creek. Communities and cities along the Russian River include Ukiah, Hopland, Cloverdale, Geyserville, Healdsburg, Forestville, Mirabel Park, Rio Nido, Guerneville, Monte Rio, Duncans Mills, and Jenner.

Two major reservoir projects provide water supply storage in the Russian River watershed: 1) Coyote Valley Dam/Lake Mendocino, located on the East Fork of the Russian River three miles east of Ukiah, and 2) Warm Springs Dam/Lake Sonoma, located on Dry Creek 14 miles northwest of Healdsburg. The Water Agency is the local sponsor for these two federal water supply and flood control projects, collectively referred to as the Russian River Project. Under agreements with the United States Army Corps of Engineers (USACE), the Water Agency manages the water supply storage space in these reservoirs to provide a water supply and maintain minimum instream flows in the Russian River and Dry Creek. The Water Agency releases water from storage in these reservoirs where it flows downstream to the Water Agency's primary points of diversion at Wohler and Mirabel Park. At Wohler and Mirabel Park, the Water Agency operates a series of wells that pump water from the aquifer beneath the Russian River and deliver that water through its transmission pipeline system to municipalities, where the water is used primarily for residential, governmental, commercial, and industrial purposes.

At Mirabel Park, the Water Agency operates an inflatable dam, known as the Mirabel Dam, located approximately 2,600 feet downstream of the Wohler Bridge (Figure 2), which is used seasonally when the Russian River flows fall below 1,000 cubic feet per second (cfs). When the dam is inflated, the water level behind the dam raises by 11 feet and submerges a diversion structure consisting of drum fish screens, pump intake structure piping, and a pump station (Photos 1 and 2). The Water Agency uses this

diversion structure to pump water from the Russian River into infiltration ponds adjacent to the Russian River. These infiltration ponds help to recharge the gravel aquifer underneath the Russian River thereby enhancing the Water Agency's ability to more efficiently collect naturally filtered groundwater. When the Mirabel Dam is inflated, two fish ladders on either end of the dam allow fish passage. The Water Agency operates a video monitoring system at the fish ladders to track fish passing upstream or downstream of the inflatable rubber dam. The replacement of the existing fish screens, the modification of the intake structure at the diversion structure, and the modification of one of the existing fish ladders is the subject of the Mirabel Fish Screen and Fish Ladder Replacement Project.

Studies have found that the existing fish screening facilities at the diversion structure perform less than adequately for full protection of juvenile fish, particularly young salmon and steelhead. The Russian River Biological Opinion requires that the fish screens be replaced by October 2014 to meet contemporary performance criteria. These guidelines and criteria are summarized in a document prepared by NMFS titled "Fish Screening Criteria for Anadromous Salmonids" (NMFS 1997).

Additionally, the Water Agency is replacing the existing west side (river right) fish ladder to complement the new fish screens and to enhance fish passage while increasing operational flexibility with the inflatable dam. Proposed modifications would occur on the western bank of the Russian River. No modifications are proposed for the existing fish ladder on the eastern bank of the Russian River. The Water Agency currently inflates the Mirabel Dam with a notch to concentrate flows over a specific portion of the dam (Photo 3). Fish monitoring studies have shown that fish passage downstream over the Mirabel Dam is enhanced through the addition of this notch (Manning 2005). However, maintaining this notch presents operational challenges. Daily adjustments in the notch are necessary to maintain consistent downstream flows, due to the expansion and contraction of the dam in response to heat and sunlight. The proposed west side fish ladder reconstruction would allow for flows through the new fish ladder that are attractive to fish migrating downstream, so that notching the Mirabel Dam would no longer be necessary. In addition to reducing current operational challenges, the proposed design of the new fish ladder (proposed vertical slot fish ladder versus the existing Denil type fish ladder) would expand the effectiveness of the fish ladder over a wider range of flows.

A redesign of the fish ladder would allow the Water Agency to enhance existing fisheries video monitoring and provide better opportunities for viewing fish migration. The new fish ladder facility would contain a dedicated viewing window room that would house the video monitoring equipment and would only be accessible to employees. A separate viewing window area and viewing platform are also proposed as part of the upgrades to the facility. Approximately 3,000 schoolchildren visit the existing fish ladder facility at Mirabel as part of the Water Agency's Water Education Program. The proposed viewing areas would enhance the visitor experience by providing a better overall view of the facility and a view into the side of the fish

ladder. During the migration season, the viewing window would allow visitors to see fish migrating through the new fish ladder.



Figure 1

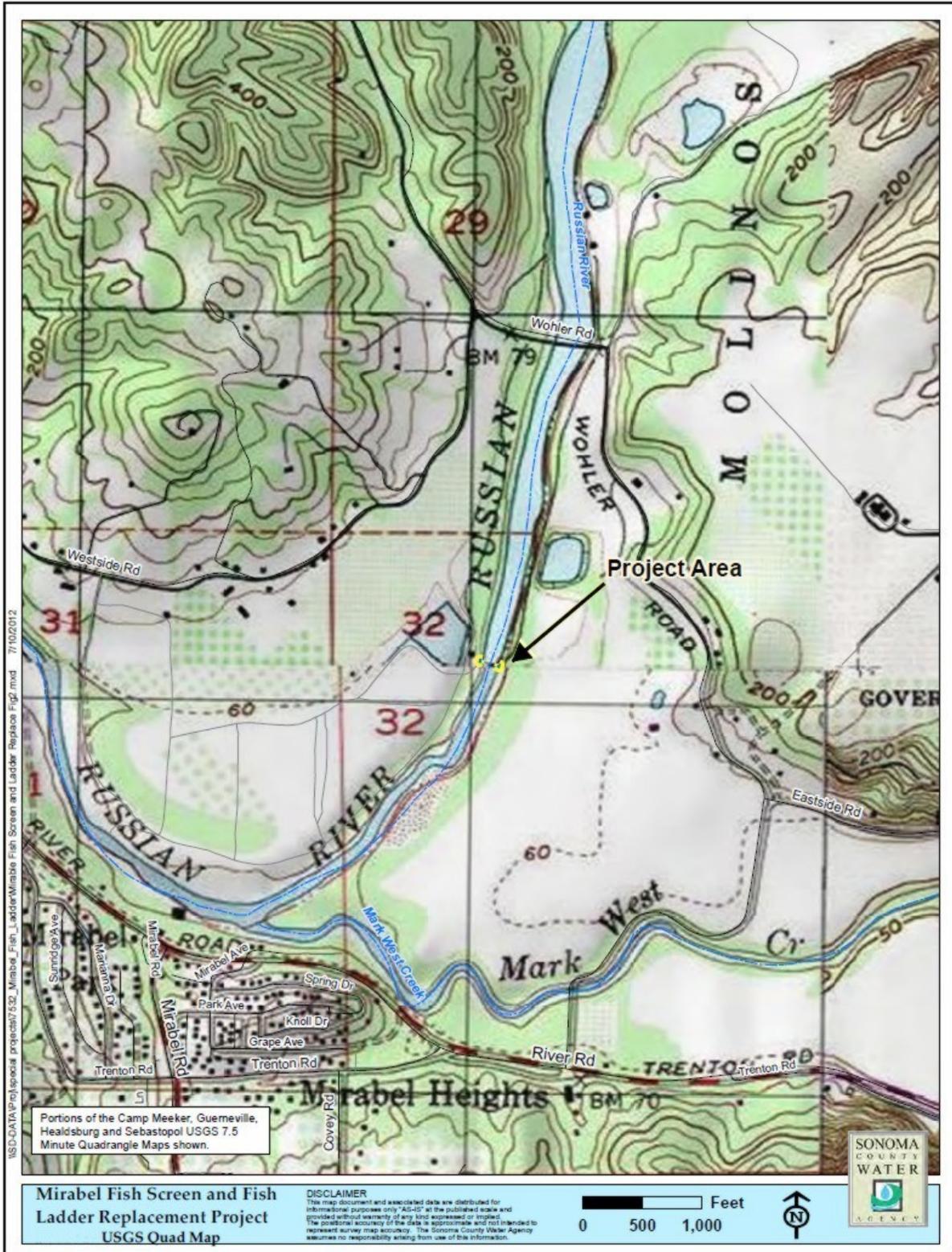


Figure 2



Photo 1. Mirabel Dam



Photo 2. Existing Mirabel West Side Fish Ladder and Fish Screen/Intake Structures



Photo 3. Mirabel Dam With Notch

PROJECT OBJECTIVE

The objective of the Mirabel Fish Screen and Fish Ladder Replacement Project is to provide a fish screen that meets hydraulic design criteria to avoid impacts to threatened and endangered fish, maintain or improve fish passage through the fish ladder, and improve monitoring and educational opportunities at the Mirabel Dam and diversion facilities.

PROJECT LOCATION

The Mirabel Fish Screen and Fish Ladder Replacement Project would be located at the site of the Water Agency's existing Mirabel Dam along the Russian River approximately 2,600 feet downstream of the Wohler Bridge in Sonoma County, California, shown on Figure 1 and 2 above and in Figure 3 below. Proposed modifications would occur on the western bank of the Russian River. No modifications are proposed for the existing fish ladder on the eastern bank of the Russian River.

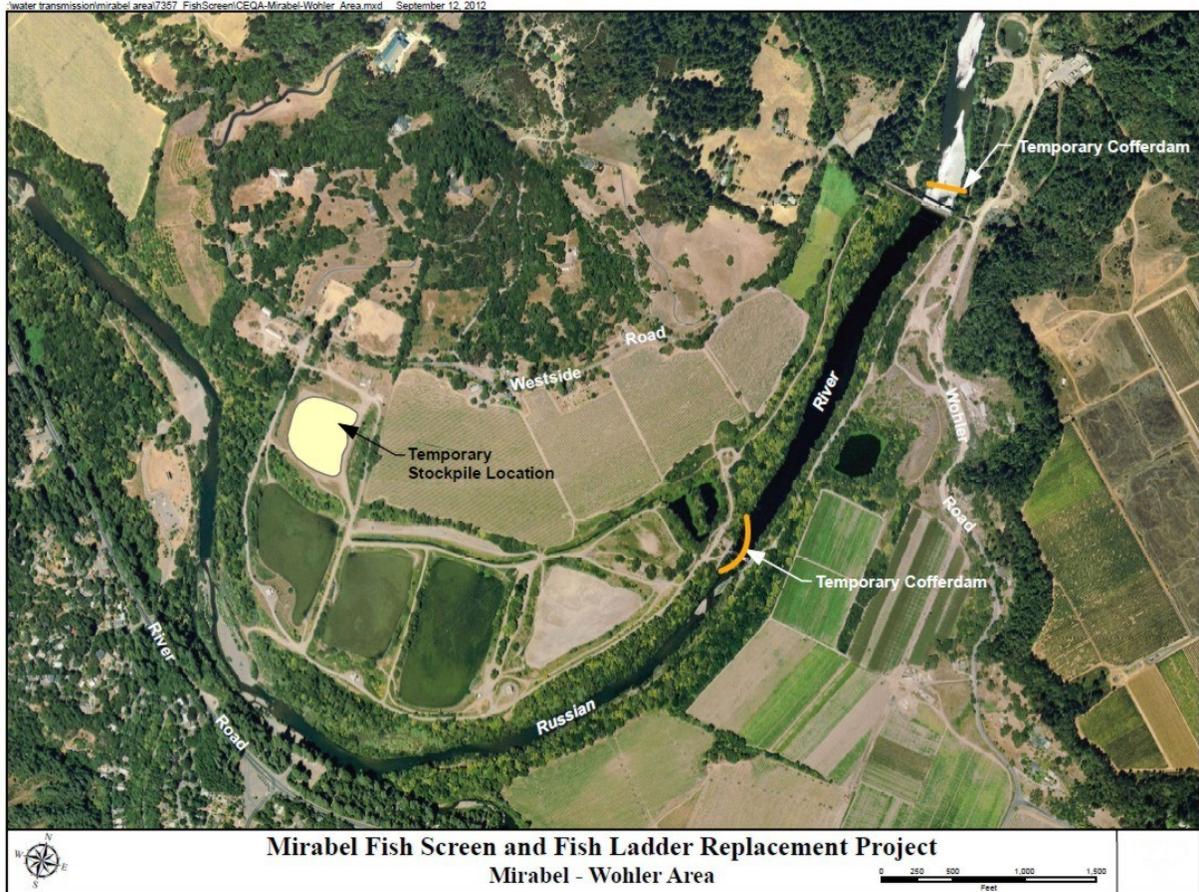


Figure 3

PROJECT DESCRIPTION

Project components consist of those relating to the fish screen modifications and those relating to the fish ladder modifications. Project construction activities would require isolating the work area from the active flow of the Russian River, demolishing the existing fish screen/intake and fish ladder structures on the western bank of the Russian River, and constructing the new fish screen/intake and fish ladder structures. The new facilities would extend approximately 40 feet farther upstream and approximately 100 feet farther downstream than the existing facilities. This larger footprint is necessary to meet contemporary fish screen and fish passage design criteria (NMFS 1997). Figure 4 shows a plan view of the proposed project design. Figure 5 shows a conceptual design drawing of the proposed project components.

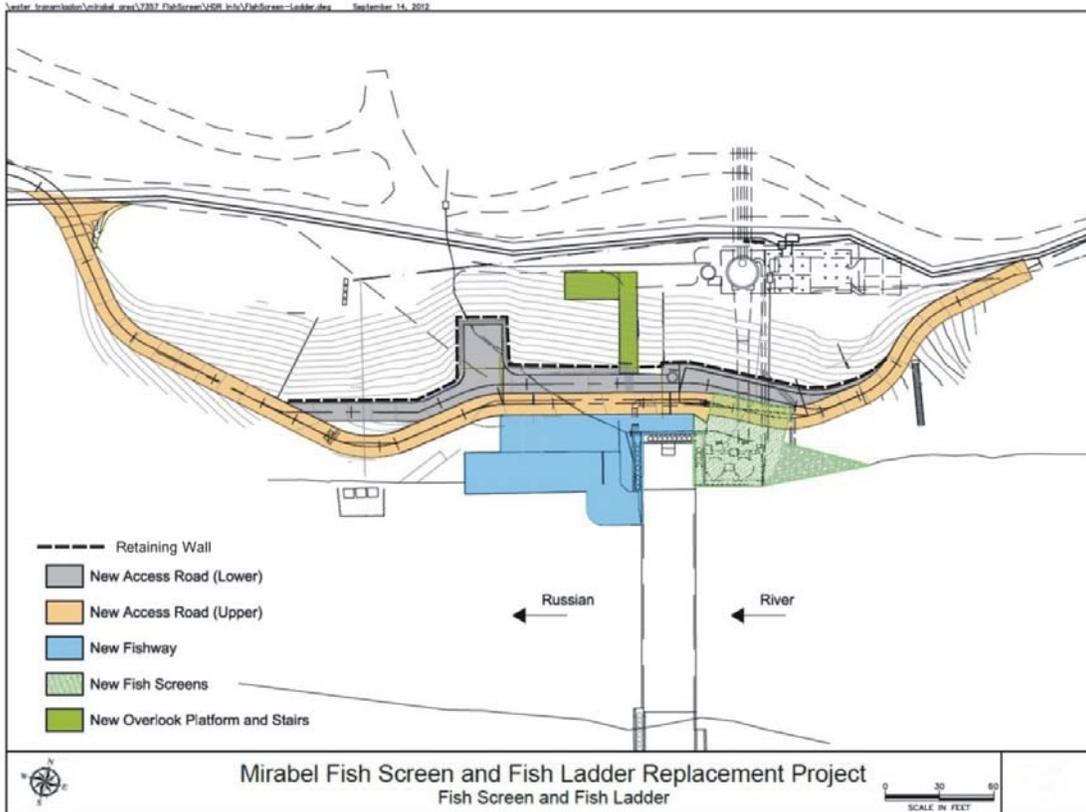


Figure 4



Figure 5

Fish Screen

The proposed intake screen would consist of six 12-foot tall by 6-foot wide panels, with a total area of 432 square feet. The new fish screen would also incorporate a cleaning system to ensure that the screen material does not become clogged. Clogged screens result in higher flows through unclogged portions of the screen, which can lead to fish getting trapped against the screen. The cleaning mechanism is anticipated to be an electric motor-driven mechanical brush system that periodically moves back and forth to clean the intake screen structure.

Fish Ladder

A vertical slot type fish ladder was selected as the recommended design to provide passage for upstream migrating salmonids. Vertical slot fish ladders are commonly used for salmon and steelhead (among other fish species) throughout the world. A vertical slot fish ladder consists of a sloped, reinforced concrete rectangular channel separated by vertical baffles with 15-inch wide slots that extend down the entire depth of the baffle. The baffles are located at even increments to create a step-like arrangement of resting pools.

The design would be self-regulating and provide consistent velocities, flow depths, and water surface differentials at each slot throughout a range of operating conditions. It is anticipated that the ladder would be configured to accommodate a range of fish passage conditions while the Mirabel Dam is up and river flows ranging from 125 to 800 cfs. Fish passage while the Mirabel Dam is down would also be accommodated, but is not the primary focus of design. The fish ladder would extend approximately 100 feet further downstream than the existing fish ladder at the site.

Fisheries Monitoring Components

The Water Agency currently conducts a variety of fisheries monitoring activities at its Mirabel Dam facilities. The new fish ladder design would support these monitoring activities by providing a dedicated viewing window and video equipment room and a fish trapping and holding area built into the fish ladder. The monitoring information collected by Water Agency staff is critical in tracking population trends and movement of different species in the Russian River system.

Education Opportunities

The existing facility at Mirabel is visited every year by approximately 3,000 schoolchildren as part of the Water Agency's water education efforts. The existing facility allows schoolchildren to see a critical component of the Water Agency's water supply system, but the views of the top of the existing fish ladder do not offer much opportunity for observing and learning about the fisheries of the Russian River system. The proposed project would include a viewing area, separate from the video monitoring viewing window, which would allow visitors to see into the side of the fish ladder. The educational experience for schoolchildren would be improved by having the opportunity to actually see fish travelling up or down the fish ladder.

Supporting Components

The project design would also include a variety of other components that would support the primary fish screen and fish ladder aspects of the project. These other components consist of items such as replacement of the buoy warning line upstream of the Mirabel Dam, modification of the existing access road to the project site, and the installation of a viewing platform to allow visitors a safe location to view the overall facility. The existing access road down to the Mirabel Dam is a steep one-way road. Vehicles going down to the Mirabel Dam area must be turned around or backed up the road down to the project site. The proposed project includes a modification of the access road so that the road will not be as steep and will include both an entrance and exit ramp from the Mirabel Dam site. Because the site is a major component of the Water Agency's water education program where several thousand schoolchildren are brought out to the site each year, the design for the new access road also includes a parking area at the Mirabel Dam that is compliant with Americans with Disabilities Act access standards. The viewing platform would be a deck area at the elevation of the existing upper levee road above the Mirabel Dam that would allow visitors to the site to view the facility. A stairway from the top of bank down to the Mirabel Dam would allow visitor access from the upper levee road area down to the Mirabel Dam.

POTENTIAL IMPACT PERIODS

Projects typically can have potential impacts to the environment during the construction of the facility, during the anticipated operation of the facility, and as a result of expected future maintenance activities associated with the facility.

Construction

Construction activities can result in longer term impacts that extend beyond the construction period, such as would occur with removal of vegetation during construction or the placement of new facilities within a scenic area. However, the majority of potential construction-related impacts are temporary in nature and cease to occur upon completion of construction activities. Typically, this would include activities such as construction vehicle traffic, construction noise related to vibratory or hydraulic hammer pile and sheet pile driving, removal of the existing fish screen and ladder, and the construction of new project components. Construction activities are anticipated to occur between June 15th and October 15th of 2013 and 2014. Depending on weather, construction activities out of the water and not requiring any water diversion or dewatering could continue between October 15, 2013 and June 15, 2014.

Temporary dewatering of the work area will require cofferdams to divert the flow of the Russian River away from the west bank of the project area during construction. Figure 6 shows the proposed location of the temporary cofferdam and dewatered work area at the Mirabel Dam location. Water would either be isolated by temporary cofferdams to the eastern side of the river channel or diverted around the eastern abutment of the Mirabel Dam. An existing set of sheet pile walls east of the Mirabel

Dam can be utilized to divert flows around the Mirabel Dam. Using this sheet pile channel would require excavating the soil between the sheet pile walls at the eastern abutment of the Mirabel Dam and installing a temporary inflatable cofferdam upstream to divert the river flow through the sheet pile channel. Photo 4 shows the top of this existing sheet pile channel and an upstream (gravel) cofferdam that was used in 1995 when the bladder for the Mirabel Dam was replaced. An example of the installation of a water-filled temporary cofferdam is shown in Photo 5, taken in 2006 during repair work at the Mirabel Dam. Once river flow is diverted to isolate the work area, water from within the isolated work area would be pumped out of the construction zone and into the Water Agency's existing infiltration ponds west of the Russian River. Because of the permeability of the gravels in the work area and the depth of excavation, dewatering from within the work area would likely require multiple pumping points, using temporary wells or "well points". Additional sheet piling may be necessary within the isolated area to cut off infiltrating groundwater, and to shore the excavation cuts for the structure foundations.

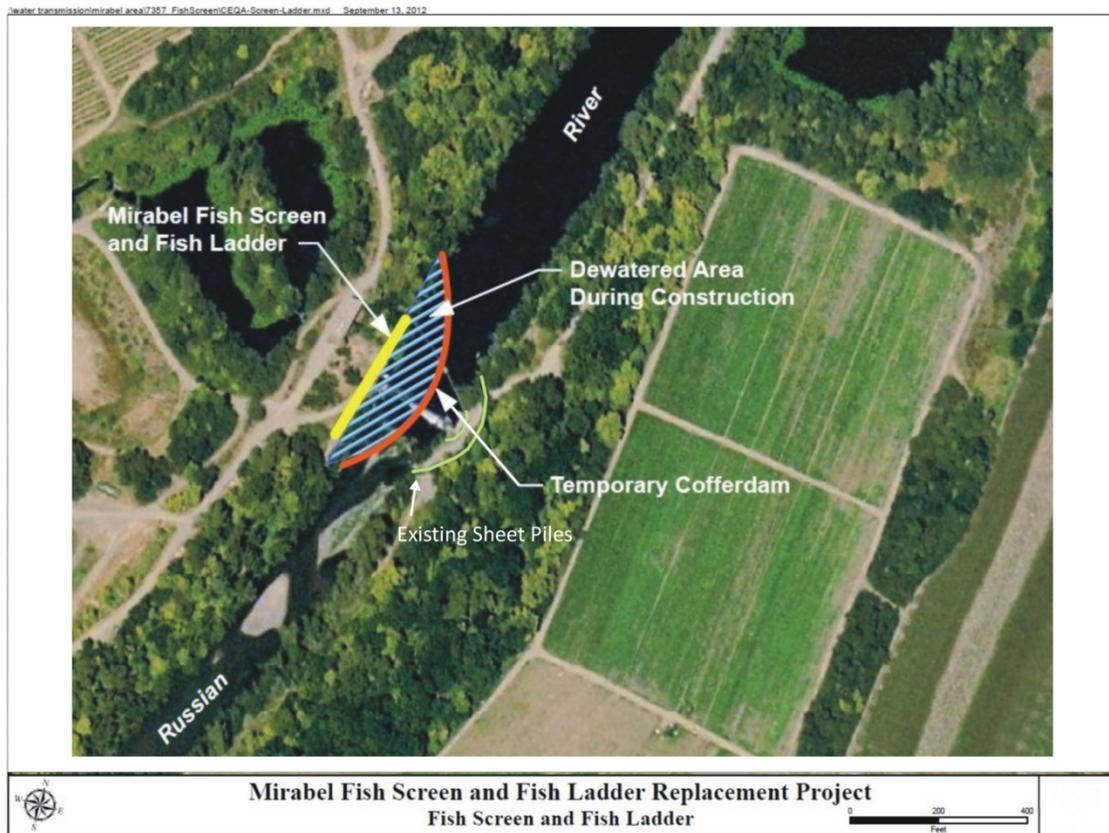


Figure 6



Photo 4: Existing sheet pile channel and an upstream (gravel) cofferdam that was used in 1995 when the bladder for the Mirabel Dam was replaced



Photo 5: Example of the installation of a water-filled temporary cofferdam

Because the Mirabel Dam, and the associated pool of water that backs up behind the dam, is critical to the operation of the Water Agency's potable water delivery system, a temporary cofferdam upstream of the project area would need to be installed throughout the summer construction periods. This temporary cofferdam would be installed just upstream of the Wohler Bridge (location shown in Figure 3 above). Access to this location would be along existing service roads. Disturbance to vegetation is anticipated to be minimal (minor trimming of vegetation at either end of the cofferdam). The cofferdam material would likely be an inflatable water-filled bag spanning the river at this location; although a gravel cofferdam was used at this location in the past and could be another option. Whatever material is utilized, the temporary cofferdam would include a temporary fish ladder to allow continued fish passage through the area. Photo 6 below is an example of one type of seasonal fish ladder installed at a summer dam in the Vacation Beach area of the Russian River. Other passage methods, such as a series of cofferdams to provide a cascading riffle below the primary cofferdam may be utilized. A portage route around the temporary cofferdam location already exists. Temporary signage for the portage route and warning buoys and signs for the cofferdam would be installed during construction.



Photo 6: Example of one type of seasonal fish ladder installed at a summer dam in the Vacation Beach area along the Russian River

Approximately 8,000 cubic yards of material will be removed to construct the fish ladder structure. Materials excavated from the work area for the construction of the project components and the access roads would be transported to an existing spoils disposal area within the Water Agency's Mirabel facility (location shown in Figure 3).

In addition to the fish ladder and fish screen structures, extensive over-excavation may also be necessary to construct the retaining wall supporting the high cut bank above the lower portion of the access road, the parking area, and fish ladder viewing gallery. The retaining wall will range from approximately 4 to 25 feet in height, and construction of the retaining wall and associated anchoring will require removing (excavating) and reconstructing the levee adjacent to the fish ladder and fish screen structures down to the elevation of the access road, and may involve as much as 5,000 cubic yards of additional earthwork. Extensive excavation will also be necessary adjacent to the new fish ladder structure to expose and tie in the multiple piping connections to the Pump Station.

Operation and Maintenance

For the proposed project, the new facility is not expected to result in any new activities during the operation and maintenance phases beyond those that already occur with the existing facilities. The Water Agency has to annually clean up some materials and debris that deposits on the Mirabel Dam facilities. Due to the nature of the proposed viewing gallery, this area would be subject to collecting material during high flows., which would increase the level of clean-up effort after the each high flow season. Cleanup will require mucking out all the sediment that accumulates in the gallery and washdown. All washdown water would be pumped over the levee into the ponds. In addition, preparation for flood events (or a shutdown for the entire high flow season) would require the installation of protective covers on the viewing gallery windows to protect them from damage.

PROJECT ALTERNATIVES

The Water Agency is required under the Russian River Biological Opinion to design a new fish screen at its Mirabel facilities that meets current California Department of Fish and Game (CDFG) and NMFS specifications for avoiding impingement of fish against the screens or stranding of listed salmonids. Because of this requirement, alternatives for the screen portion of the project are limited to alternative types of screens. Similarly, because the proposed fish ladder and visitor viewing aspect of the proposed project is integrally tied in with the modification of the existing facility at Mirabel, alternatives for the fish ladder and viewing chamber are limited to alternative screen designs that can meet CDFG and NMFS specifications. Since the viewing chamber and fish way re-design are not required by the Russian River Biological Opinion, the option of just replacing the fish screens and not including the fish ladder re-design or the viewing chamber does existing; however, without the fish ladder re-design, any fish screen design would need to be bigger to counteract the lower sweeping velocities that currently exist.

In 2009, the Water Agency began a feasibility study to evaluate what type of fish screen and fish ladder would be suitable for the Mirabel site. A copy of the 2009 feasibility study is included in Appendix A. The objectives of this feasibility study were to:

- Provide for a fish screen that meets contemporary hydraulic design criteria (approach velocity = 0.33 feet per second; sweeping velocity = 2 times approach velocity) at the 100 cfs maximum diversion rate.
- Maintain or improve downstream fish passage and provide for control of steady bypass flows. Control should be through the use of a fish-friendly hydraulic structure or structures that can accommodate a range of expected bypass flow requirements.
- Maintain existing diversion rate and operating water surface. (Elevation 38.0 feet is normal operating water surface, elevation 39.0 feet is maximum operable, elevation 36.0 feet is considered the minimum operable water level).
- Provide a design that is compatible with and does not preclude opportunities for significant future dam modifications or replacement.
- Maintain or improve upstream fish passage monitoring capability.
- Maintain or improve upstream fish passage.
- Provide for educational opportunity.
- Maintain recreational river portage around dam and enhance portage with new facilities that also provide educational opportunities.
- Identify a project that offers good value and reliable known costs over the next 50 years.
- Provide for water diversions at low, non-impounded flows.

A Technical Advisory Committee (TAC) was formed with representatives from CDFG, NMFS, and the Water Agency. The first TAC meeting was held on July 20, 2009 in which the statement of objectives was reviewed and fish screen replacement alternatives were discussed. The meeting helped guide the concept designs toward a preferred alternative.

A preferred concept design alternative was determined and was presented to the TAC on September 28, 2009. The preferred concept design consisted of an inclined fish screen with a vertical slot fish ladder. The TAC concluded that this design better matched the project objectives compared to other concepts. The components of the preferred concept design included a new intake with an inclined¹ flat plate fish screen system, an oversized screen for increased bypass flow control and capacity, and a bypass fish ladder in the form of a vertical slot fish ladder. The TAC also reviewed the preferred concept design alternative in the field during a site visit. TAC feedback was positive for the concept design and the Water Agency proceeded to move forward to the next phase of design with the preferred concept.

¹ The preferred project design has since been modified to have the intake screens be vertical instead of inclined.

Basis for Preferred Concept Design Alternative

In working through the concept design alternatives it became increasingly apparent that the objectives of improving downstream fish passage and providing for control of steady bypass flows were equally important components of providing a fish screen that meets contemporary hydraulic design criteria. The Water Agency's design consultant determined that that a new fish screen meeting criteria can be easily designed if a fish-friendly passageway component for flow bypass can be combined with the new intake structure. The challenge was not in providing an adequate fish screen so much as providing for attractive fish migration and bypass flow control. In essence, the integration of a new fish ladder, and its associated hydraulics creating higher sweeping velocities for the upstream fish screen structure, was an important concept design strategy. A new fish ladder providing higher sweeping velocities would allow for a smaller fish screen structure. Higher sweeping velocities (flows downstream) offset the potential for fish to get trapped (impinged) by flows going through the fish screens into the diversion intake. Many variations and options of a fish-friendly configuration that provided good bypass flow control and flow capacity were considered. These included replacing all or part of the dam with overflow gate systems, integrating a gate and control system just outside of either dam abutment, and relocating the water diversion into a canal. These options vary in degrees of fish-friendliness and flow capacity and control but in general, the more fish-friendly any individual component or system may become the less capacity and control for bypass flow it tends to have for water diversions. A balance of the two aspects was obtained by focusing the design strategy on developing a large capacity fish-friendly bypass structure. The most beneficial structure for fish passage, other than a natural channel, is a fish ladder. The advantage of fish ladders, with well-defined flow ranges, is that they can be located in smaller areas by folding their hydraulic profile into a smaller footprint when compared to a natural channel.

A revised alternative that includes a vertical slot fish ladder was developed and better matched the project objectives compared to previous concepts. The components of this revised concept include a new diversion intake with a vertical flat plate fish screen system, an oversized screen for increased bypass flow control and capacity, and a bypass fish ladder in the form of a vertical slot fish ladder. The increased sweeping flows past the intake structure that would occur with a new vertical slot fish ladder allowed for the proposed intake screens to be vertical instead of inclined, which results in a smaller footprint area for the screens and reduced maintenance requirements since vertical panels would be subject to less debris accumulation than inclined panels.

Other Alternatives Considered

The first concept alternative considered was to simply retrofit the existing drum screens or intake. One variation of this could include fixing the drums in place so that they do not rotate, adding baffling behind the screen material, replacing the solid top of the drum with screen material, and other features to help reduce the chaotic

nature of the hydraulics around the drums. This approach is considered experimental and would likely require many trial and error attempts at proving that the retrofit would meet CDFG and NMFS fish screen criteria. It would also not meet many of the project objectives and was therefore dropped from further consideration.

During preparation of the Biological Assessment², and subsequent to the Mirabel fish screen performance evaluation, a concept design alternative of permanent modifications to the facility was developed (Borcalli and Associates 2001). This alternative was designed to strictly meet the objective of adhering to contemporary fish screen criteria. This 2001 concept alternative included a vertical, flat plate fish screen oriented on a diagonal to the bank and integrated into the existing intake structure with some concrete intake modifications at the upstream end. It also included mechanical straps to adjust the dam shape for more controlled hydraulics and flow over the dam. Based on recommendations from the dam manufacturer, the Water Agency determined that the mechanical straps over the dam would not be allowed. This concept alternative was included with the others in the evaluation process but because it did not significantly improve downstream fish migration and bypass flow control it was not considered viable going forward. This fish screen configuration was used as a design basis in the other concept design alternatives.

The next concept design alternative that was considered is a newer type of modular fish screen system called a cone screen. Two removable cone screens would be placed into a retrofitted intake. As part of this concept the intake pipes under the drum screens would be relocated to better balance the flows between them. Because this concept would require substantial reworking of the intake and did not meet many of the other project objectives it was not considered further.

Three more concept design alternatives were developed. These included a new fish screen with a vertical slot fish ladder, a new fish screen with pool-and-chute fish ladder, and a east bank bypass channel (opposite side of river) with a separate fish screen improvement inclusive of the above concepts. The ladders and bypass channel were primarily considered for enhancing the quantity and attractiveness of flow components for downstream fish migration. The bypass channel was analyzed for the left bank because there are two existing rows of sheet pile around the dam abutment about 20 feet apart that can form the sides of a bypass channel. These existing sheet pile rows were used in the past as a river bypass during the construction and subsequent repairs to the Mirabel Dam. The new fish screen with a vertical slot fish ladder was selected as the Preferred Concept Design Alternative.

² The Biological Assessment was an evaluation of how the U.S. Army Corps of Engineers, Water Agency, and Mendocino County Russian River Flood Control and Water Conservation District's existing operations impacted Endangered Species Act listed salmonid species in the Russian River basin. The Biological Assessment is the basis for the NMFS 2008 Russian River Biological Opinion.

No Project Alternative

The No Project alternative would mean that the Mirabel fish screens would not be brought up to current CDFG and NMFS design criteria and that the Water Agency would be out of compliance with one of the required components of NMFS Russian River Biological Opinion.

NOTICE OF PREPARATION AND SUMMARY OF COMMENTS

On July 20, 2012, 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 CDFG, the California State Water Resources Control Board, and the California State Lands Commission. Copies of the NOP and comments received are included in Appendix B. A summary of written comments and the Water Agency's responses are provided below.

California Department of Fish and Game

Summary of Comments: The CDFG submitted comments on the NOP requesting an assessment of the habitats, flora, and fauna within and adjacent to the project area. CDFG advised that a California Endangered Species Act Permit must be obtained if the project has the potential to result in the take of species of plants or animals listed under the California Endangered Species Act. CDFG also advised that a Lake and Streambed Alteration Agreement pursuant to Section 1600 et seq. of the California Fish and Game Code would be required.

Response: The Water Agency has included a description of the proposed project as well as a breakdown of the habitat types within the project area. Upon completion of the CEQA process, the Water Agency will submit permit applications for coverage under the California Endangered Species Act and Section 1600 et seq. of the California Fish and Game Code. The Water Agency has been coordinating the project design with NMFS and CDFG staff to ensure that the project design as well as implementation, effectiveness, and validation monitoring are in compliance with NMFS and CDFG standards.

California State Water Resources Control Board

Summary of Comments: The California State Water Resources Control Board (State Board) submitted comments on the NOP noting that the Water Agency is required under conditions of a 2012 Temporary Urgency Change Petition (TUCP) order issued by the State Board to monitor and record salmonid migration at Mirabel Dam. The State Board recommended in its NOP comments that the Water Agency continue compliance with the 2012 TUCP Order and ensure that the Project does not interfere with terms in the Water Agency's existing water rights.

Response: The Water Agency intends to continue its monitoring of salmonids migration in the project area throughout construction; however, some monitoring methods may have to be modified. It is likely that downstream migrant screw-trap monitoring would be able to continue in the spring and early summer. Once the demolition of the fish ladder on the western side of the dam begins, video monitoring of adult upstream migrants in the fall would not occur until construction is complete. The Water Agency is investigating the feasibility of using acoustic sonar cameras as an alternative means of monitoring upstream migration during construction.

California State Lands Commission

Summary of Comments: The California State Lands Commission (CSLC) submitted comments on the NOP requesting that the Water Agency provide a thorough and complete Project Description in the Initial Study; consider sensitive species in the project area; evaluate noise and vibration impacts on fish and birds from construction activities; evaluate greenhouse gas emissions for the project; evaluate cultural resources; and evaluate the cumulative effects of the proposed project along with other projects required under the Russian River Biological Opinion.

Response: This IS/MND provides a thorough and complete description of the proposed project and the consideration of the potential impacts to environmental resources in the project area.

ENVIRONMENTAL SETTING

The Russian River watershed consists of a series of valleys surrounded by two mountainous coast ranges, the Mendocino Highlands to the West and the Mayacamas Mountains to the east. The Santa Rosa Plain, Alexander Valley, Hopland (or Sanel) Valley, Ukiah Valley, Redwood Valley, Potter Valley and other small valleys comprise about 15 percent of the watershed. The remaining area is hilly to mountainous. Principal communities are Ukiah, Hopland, Potter Valley, Cloverdale, Healdsburg, Windsor, Forestville, Sebastopol, Santa Rosa, Rohnert Park, Cotati, and the Russian River resort area, stretching from Mirabel Park to the mouth of the Russian River and includes the communities of Rio Nido, Guerneville, Monte Rio, Duncans Mills and Jenner. The project area is located in rural, unincorporated Sonoma County, near the town of Forestville. The project area is accessible from Westside Road south of the Wohler Bridge.

Recreation is also a major industry in the Russian River watershed. Besides recreational opportunities at Lakes Mendocino and Sonoma, the Russian River itself is extensively used for water sports such as canoeing, swimming, and fishing. Many summer homes and resorts are located along the Russian River near Healdsburg and between Mirabel Park and Duncans Mills.

Topography

The project area is located on the west bank of the Russian River just downstream of the Wohler Bridge. The Russian River valley is approximately 3,000 feet wide at the Mirabel dam. The land generally rises gradually from the Russian River, although in some places there are steep embankments or terraces. Topography is relatively flat on the tops of the levees in the project area. Throughout the project site, bank heights are approximately 30 feet high.

Soils and Geology

The principal geologic formations in the lower Russian River valley are alluvium and consolidated bedrock of Jurassic and Cretaceous Age. Also included are river-channel deposits, erosional remnants of terrace deposits, and the Merced Formation. Bedrock at the site consists of sandstone, shale, chert, and metamorphic rocks of the Jurassic age Franciscan, and Cretaceous age Knoxville formations (Herzog Associates, 1992). Generally the rocks are highly fractured and absorb and store water (Cardwell, 1965).

Upstream of the Mirabel dam, the Russian River enters a narrow "canyon" that ranges from less than 1000 feet wide at Wohler Bridge to more than 3000 feet wide in the Mirabel area. Upstream of this "canyon", the river valley is more than a mile wide. A constriction in valley width generally results in higher energy river flows, and deposition of coarser, more permeable materials (Harding Lawson Associates, 1988). Just downstream of the Mirabel Dam area the Russian River valley becomes even wider, up to 5000 feet, where Mark West Creek enters the Russian River valley (Herzog Associates, 1992).

The subsurface material in the well field area is alluvium deposited by the Russian River. (Cardwell, 1965) Well logs indicate that alluvium in the well field area varies in thickness from 60 to 70 feet. (Herzog Associates, 1992) This alluvium is generally composed of Quaternary-age deposits of fine-grained silty sand overlying sand and gravel. The sand and gravel, which contains interbedded silt and clay lenses, comprises the predominant aquifer material in the Russian River valley. Recharge to this alluvial aquifer is primarily by infiltration from the River and from the artificially constructed infiltration ponds located near the Water Agency's Mirabel Collector Wells, which are large wells where water is pumped for water supply purposes from the aquifer underlying the Russian River. Recharge from rainwater infiltration through the surrounding bedrock is considered to be minor by comparison (Harding Lawson Associates, 1988) (Herzog Associates, 1992).

Four soil types characterize the Mirabel area: alluvial land, riverwash, Yolo sandy loam, and Yolo loam overwash. These soils are generally suitable for gravel mining, orchards and vineyards, pasture, timber, and wildlife habitat (USDA Forest Service and Soil Conservation Service, 1972).

Seismicity

Two known fault traces occur near the Mirabel area: 1) a probable extension of the Mt. Jackson Fault Zone, which likely trends beneath the alluvium in the vicinity of the Mirabel Collector Wells, and 2) a projected trace of the Porter Creek Fault Zone, which parallels the Mt. Jackson Fault approximately one-half mile northeasterly. Both Fault Zones are considered potentially active, although they have not produced any significantly damaging earthquake during historic time (Bace Geotechnical, 1994).

The nearest active fault to the site is the Healdsburg-Rodgers Creek Fault, which is located approximately 10 miles easterly of the site. Future damaging earthquakes could occur on this fault, or on the active San Andreas Fault, which is located approximately 15 miles southwesterly of the site. Intensity of ground shaking at the site would depend on the distance to the earthquake epicenter, the magnitude of the quake, and the response characteristics of the underlying materials. The maximum earthquake potential at the site is from a major event on either the San Andreas or Healdsburg-Rodgers Creek Faults. The Maximum Credible Richter-scale Magnitude quakes for the active San Andreas and Healdsburg-Rodgers Creek Faults are 8.5 and 7.0, respectively (Bace Geotechnical, 1994).

Vegetation

Vegetation in the project area has undergone considerable changes caused by past and present agricultural use and Water Agency activities, and by past gravel mining activities. The project area is located at an existing facility with existing access roads in the area. The project area footprint does expand beyond the existing facility footprint into vegetated areas surrounding the Mirabel dam. The surrounding riparian vegetation contains a mix of native species and introduced non-native species. The dominant canopy trees in the area adjacent to the Russian River include: box elder (*Acer negundo*), cottonwood (*Populus fremontii*), walnut (*Juglans hindsii*), and willow (*Salix* sp.). The understory is characterized by Pacific and Himalayan blackberry (*Rubus ursinus* and *Rubus discolor*), mugwort (*Artemisia douglasiana*), periwinkle (*Vinca major*), poison hemlock (*Conium maculatum*), fennel (*Foeniculum vulgare*), stinging nettle (*Urtica dioica* ssp. *gracilis*), and areas of giant reed (*Arundo donax*). Some live oak trees (*Quercus agrifolia*), blue elderberry (*Sambucus mexicana*) and coyote brush (*Baccharis pilularis*) are located on the far side of the levees, away from the Russian River (Cuneo, 2012). A copy of special status species potentially occurring in the project area is included in Appendix C and a list of plant species observed within the project area is included in Appendix D.

Wildlife and Fisheries

Riparian woodland is the predominant habitat type in and around the project area. In the immediate vicinity of the Mirabel Dam, the riparian vegetation was previously disturbed during the construction of the existing facility.

Coho salmon, Chinook salmon, and steelhead use the lower mainstem Russian River (including the project area) primarily as a migration corridor. Adults pass through the Mirabel Reach of the river during their migration to upstream spawning and rearing habitat. Juveniles (smolts) migrate through the area during their downstream journey to the ocean. However, small numbers of steelhead have been observed in the project area throughout the summer period, indicating that either they migrate at low levels throughout the year, or that rearing occurs in the area, albeit at low levels. 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 the Russian River.

Construction in or near the streambed for the proposed project would occur during the low flow months of June-October when special status fish species would least likely be in the area. The construction site on the west side of the river would be dewatered during construction activities. There is potential for upstream migrating adult Chinook salmon to be present within the project area during September and October. Juvenile steelhead could potentially be present within the project area during June-October. Dewatering would require installation of cofferdams around the project site and diverting stream flow around the project site. All dewatered areas would require fish rescue and relocation to areas outside of the project site.

An inventory search for status and locations of rare plants and animals for the CDFG California Natural Diversity Database was conducted for the project site (Guerneville quadrangle) and the adjacent quadrangle (Healdsburg). CDFG Species of Special Concern, northwestern pond turtle (*Actinemys marmorata marmorata*) is inventoried in the adjacent quadrangle of the project area. Given the project area's supportive habitat, the project site would provide potential habitat for northwestern pond turtle. Construction activities may result in temporary loss of habitat availability within the project site. Prior to beginning construction activities, pre-construction surveys would be performed within the project site. Should northwestern pond turtle be found within the construction area, individuals would be relocated by a qualified biologist to an area of appropriate habitat outside of the construction area.

The project area includes potential nesting habitat for numerous common and special-status birds. Project activities such as ground clearing, earthmoving, grading, trenching, and trimming or removal of trees during the breeding season (generally February 1 to August 31) have the potential to result in direct mortality of these species. In addition, human disturbances and construction noise have the potential to cause indirect impacts due to nest abandonment and death of young, or loss of reproductive potential at active nests located near project activities. Any activities

occurring during the breeding season would require the following mitigations to reduce potential impacts to a less than significant level:

- Whenever feasible, vegetation shall be removed during the non-breeding season.
- For ground disturbing activities occurring during the breeding season (February 1 to August 31), a qualified wildlife biologist would conduct pre-construction surveys of the project site for nesting raptors within a 500-foot radius of construction activities, and for other nesting birds within a 50-foot radius of construction activities. Pre-construction surveys would occur within 14 days of the start of construction activities.
- If active bird nests are found during pre-construction surveys, a 500-foot “no disturbance” buffer would be established around active raptor nests during the breeding season. A 50-foot buffer zone would be established around the nests of other special status birds, or until it is determined that all young have fledged.
- These buffer zones are consistent with CDFG avoidance guidelines; however, they may be modified in coordination with CDFG based on existing conditions at work locations.
- If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees and shrubs that have been determined to be unoccupied by special-status birds or that are located at least 50 feet from active nests may be removed.

Cultural Resources

The Mirabel Dam area is located on river alluvium soils in an area that has been subject to flooding and major fluctuation in river patterns for over a century. Although riparian areas are generally considered highly sensitive to the potential occurrence of cultural resources, such a location lessens the chance of recovering any archaeological matter intact. In addition, the original construction of the Mirabel Dam in 1975 required extensive excavation and movement of soil throughout the project area. Potential cultural resources located in the area would likely have been discovered at that time.

A cultural resources literature search was conducted in December 1992 by the California Archaeological Inventory, Northwest Information Center. The literature search concluded that there is a low possibility of prehistoric or historic resources within the project vicinity. In 2012, a cultural resource survey was conducted for the proposed project (Hegensieker 2012).³ No archeological resources or historical buildings or structures were found within the study area.

³ Hegensieker, B.A. and Janine M. Loyd, M.A./R.P.A. *A Cultural Resources Survey for the Mirabel Fish Screen and Fish Ladder Replacement Project near Forestville, Sonoma County, California*. Tom Origer and Associates. July 27, 2012.

LAND USE AND CONFORMANCE WITH GENERAL PLAN

Historical and Present Land Use

The Water Agency has owned the subject property since the 1970's and has constructed and operated the Mirabel Collector Wells and ancillary facilities (infiltration ponds, rubber dam and diversion facilities) since that time. Fishing, swimming, and sunbathing have been frequent recreational activities in the project area along the Russian River. Although dedicated and signed public access to the Mirabel facilities is not provided, people frequently utilize the Water Agency's service roads for walking. The Russian River itself is also heavily utilized as a recreational access and use through the project area.

Conformance with the General Plan

The project area is subject to the land use policies and designations adopted in the Sonoma County General Plan (General Plan). The General Plan designates the project area as *Resources and Rural Development* (LIA) at a specified density of 20 acres per unit. The proposed project would not alter the Water Agency's existing operations that currently occur in the Mirabel area. The proposed project would not limit or restrict any existing activities that occur in the project area.

CUMULATIVE EFFECTS

The Russian River Biological Opinion involves both immediate and long-term actions to improve habitat and fish populations that will guide operations to protect threatened or endangered salmonids in the Russian River watershed through the year 2023. The Water Agency has developed the Russian River Instream Flow and Restoration (RRFIR) Program to implement the mandates under the Russian River Biological Opinion. In addition to modifying the fish screens at Mirabel, the following actions are mandated by the Russian River Biological Opinion:

- Permanent Modifications to the State Water Resources Control Board's (SWRCB) Decision 1610 to reduce instream flow requirements in the mainstem Russian River and Dry Creek and temporary modifications to the SWRCB's Decision 1610 instream flow requirements in the mainstem Russian River;
- Estuary Management: the Water Agency will adaptively manage the Russian River Estuary near Jenner with the primary objectives of enhancing rearing habitat for juvenile salmonids, particularly steelhead, and managing Russian River Estuary water levels to minimize flood hazard;
- Continue support of the Coho Broodstock Program;
- Decommissioning the Wohler infiltration ponds;
- Flood Control: Stream Maintenance Program; and
- Dry Creek Habitat Enhancement.

Construction effects associated with the Mirabel Fish Ladder and Fish Screen Replacement Project are anticipated to be short-term and temporary, and would not directly overlap geographically or spatially with implementation of other components of the Russian River Biological Opinion; therefore these impacts associated with the proposed project along with other components of the Russian River Biological Opinion are not adversely cumulatively considerable. Geographically, the closest Russian River Biological Opinion related project is the decommissioning of the Wohler infiltration ponds located upstream of the Wohler Bridge. Work necessary to decommission the Wohler ponds was completed in 2011. Modification of fish screens and providing an improved fish ladder design at Mirabel, is intended to minimize or remove one potential limiting factor impacting the life histories of listed salmonid species in the region. Combined with the other components of the Russian River Biological Opinion, the proposed project is anticipated to contribute to a long-term cumulatively beneficial impact designed to contribute to the recovery of steelhead, Chinook and coho salmon in the Russian River.

RIGHT-OF-WAY

The proposed project is located on land already owned by the Water Agency. No new right-of-way would be required for the project.

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 IS/MND 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 IS/MND, 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
- California State Water Resources Control Board
- California State Lands Commission
- Sonoma County Permit and Resources Management Department

FINDING

On the basis of the IS/MND, 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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) The project area is located along the Russian River just downstream of the Wohler Bridge. The project area is not identified as a Scenic Landscape Unit in the Sonoma County General Plan 2020; however, the Russian River as a whole is a scenic area that offers aesthetically pleasing views for a wide range of viewers. There would be a short-term visual impacts associated with construction activities. Project activities, such as dewatering, stockpiling of materials, removal of vegetation, demolition of existing fish ladder and screen components, excavation for the new components, and construction of the new fish screen and fish ladder components, may be considered an aesthetic impact by some people. These construction activities would be clearly visible to people traveling down the Russian River in the project area. Views of the project area from other locations are limited. Initially after construction, the project area will exhibit signs of being recently disturbed. In particular, the vegetation removed in order to construct the new access road would be noticeable. The new fish screens and fish ladders would cover a slightly larger area; however, the overall aesthetics of the new components would not be significantly different than those of the existing facilities being replaced. Because riparian plants along the banks of the Russian River grow fairly rapidly due to the high quality soils and abundant year-round water, it is anticipated that plantings incorporated into the project design will fill in within a fairly short time period (2-3 years) and the post-construction aesthetics of the project area will return to the current pre-construction condition.
- 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 may be required during the construction phase of the project. Dewatering activities may require 24-hour pumping to keep the work area adequately dewatered. If 24-hour pumping is required, an operator would be required on site at all times to maintain the pumping equipment, or available on

short notice after receiving a remote alarm. 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. Localized site light of the facility would be made available for the safety of employees and visitors accessing the viewing chambers or the site after dark. Because of the limited views of the site from other properties, proposed site lighting is not anticipated to result in any new or significant 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) The proposed project will not result in the conversion of any farmlands to other uses. The entire project area is already owned by the Water Agency and is already used as part of the Water Agency water supply system. The proposed project will not result in any changes in current uses or any conversion of farmlands.
- b) Please refer to Item II.a) above. 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.
- c) Please refer to Item II.a) above. No timber harvest activities are occurring or expected to occur within the project area,

- d) Please refer to Item II.a) above. No timber harvest activities are occurring or expected to occur within the project area,
- e) Please refer to Item II.a) above. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (4,5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations? (2,4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 one urbanized area (Forestville). According to the State of California Air Resources Board, based on 2011 area designations for air quality, 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 Russian River. 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 MFSFL-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 MFSFL-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 the proposed construction activities or operation of 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) The project area currently provides limited summer rearing habitat for salmonids, in particular for the federal Endangered Species Act listed as endangered coho salmon and threatened steelhead and Chinook salmon. Summer water temperatures in the project area limit the suitability of the Russian River in the project area for salmonids; therefore, no impacts to salmonid species are anticipated as a result of project construction activities. The completion and operation of the project is anticipated to have a beneficial impact for salmonid species. The replacement of the existing fish screens at Mirabel is a requirement of the NMFS Russian River Biological Opinion. The new fish screens would be designed to meet current design standards to reduce the potential for juvenile fish to become impinged or trapped against the screen. In addition to the new screens, the new fish ladder design, will complement the new screens by providing improved sweeping flows along the screens and into the fish ladder just

downstream of the screens. These improved sweeping flows increase fish movement downstream and reduce the potential for fish to become trapped at the screens. The new design will also allow the fish ladder to operate under a wider range of flow conditions than the existing fish ladder, which will benefit both upstream and downstream fish passage. The new fish ladder and screens is anticipated to enhance fish passage for coho, steelhead, and Chinook, as well as other fish species, such as Pacific lamprey, that move through the project area.

Construction in or near the streambed is scheduled for the months of June through October during summer low-flows. Construction earlier than June or later than October may occur depending upon weather conditions and permission from regulatory agencies. All flows in the Russian River would need to be diverted around the work area. Work areas would be isolated from the moving stream using some type of imported barrier or material (water filled bladders, gravel cofferdams, sheet pile cofferdams, etc.). An existing sheet pile channel on the eastern bank of the Mirabel Dam may be utilized. Two rows of sheet pile are already in place. The material between these sheet pile rows would be excavated out creating the channel area where the Russian River would flow around the eastern edge of the concrete edge of the base of the Mirabel Dam. A temporary barrier would be installed across the river to direct river flows into the sheet pile channel and away from the work area. Upon completion of construction, the temporary barrier across the river would be removed and the temporary sheet pile channel area would again be backfilled. This existing sheet pile channel diversion was utilized when the dam was originally constructed and again when the inflatable bag at the dam was replaced in 1995. The sheet piling remains in place for future construction or maintenance activities at the Mirabel Dam that require directing the flow of the Russian River around the Mirabel Dam. Water from the work area would be re-located out of the work area and back into the Russian River. Dewatering of the work area would then be accomplished by pumping water out of the work area and over the access road levee and into the Water Agency's existing infiltration basins west of the Russian River.

In order to maintain the Water Agency's pumping capacity for water supply throughout the summer, a temporary cofferdam upstream of the project area near the Wohler Bridge would be required to maintain the necessary aquifer infiltration for the continued operation of the Water Agency's three collector wells at Wohler. Access for installation and removal of the temporary cofferdam would be along an existing access road owned and maintained by the Water Agency and would require little disturbance to riparian vegetation in order to install. The temporary cofferdam would be designed and installed with a system to allow water and fish to continue downstream of the cofferdam. The Water Agency would adhere to the same rates of elevation rise as is used for the Mirabel inflatable dam in order to avoid stranding of fish or a disruption in flows downstream of the project. 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 MFSFL-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.*

Given the project area's supportive habitat, the project site would provide potential habitat for northwestern pond turtle. Construction activities may result in temporary loss of habitat availability within the project site.

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

The project area includes potential nesting habitat for numerous common and special-status birds. Project activities such as ground clearing, earthmoving, grading, trenching, and trimming or removal of trees during the breeding season (generally February 1 to August 31) have the potential to result in direct mortality of these species. In addition, human disturbances and construction noise have the potential to cause indirect impacts due to nest abandonment and death of young, or loss of reproductive potential at active nests located near project activities. Any activities occurring during the breeding season would require the following mitigation measure to reduce potential impacts to a less than significant level:

Mitigation Measure MFSFL-5: *Whenever feasible, vegetation shall be removed during the non-breeding season. For ground disturbing activities occurring during the breeding season (February 1 to August 31), a qualified wildlife biologist shall conduct pre-construction surveys of the project site for nesting raptors within a 500-foot radius of construction activities, and for other nesting birds within a 50-foot radius of construction activities. Pre-construction surveys shall occur within 14 days of the start of construction activities. If active bird nests are found during pre-construction surveys, a 500-foot "no disturbance" buffer shall be established around active raptor nests during the breeding season. A 50-foot buffer zone shall be established around the nests of other special status birds, or until it is determined that all young have fledged. Physical barriers such as fencing will be installed to establish the buffer zones 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.*

- b) Construction of the proposed fish screen and fish ladder, as well as construction of a new access road to the site would require the removal of riparian vegetation and bank excavation along the Russian River. Access road construction would require the removal of vegetation along an area approximately 600 feet in length and 50 feet in width. The proposed access road is being designed to avoid as many trees as possible, including the avoidance of several large cottonwood and willow species in the project area. Replanting of native riparian trees and shrubs in the area is a component of the proposed project. The following measure is included to reduce potential impacts to less than significant.

Mitigation Measure MFSFL-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 the Russian River 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 intended to increase fish passage opportunities and to reduce potential impacts to fisheries as a result of the Water Agency's existing operations at Mirabel. For work proposed within the banks of the Russian River, 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, a Streambed Alteration Permit from the California Department of Fish and Game under Section 1600 of the California Fish and Game Code, and a County of Sonoma 3836R anti-roiling permit. The total amount of existing Corps of Engineers jurisdictional area within the project area is 3.6 acres (3 acres within Ordinary High Water at the Mirabel Dam location and 0.6 acre within Ordinary High Water upstream at the temporary cofferdam location). The project would require work and fill material within Corps jurisdictional areas; however, the majority of fill would be temporary in nature (temporary cofferdams). The permanent fill material associated with the structures built is not anticipated to result in any net reduction of Corps of Engineers jurisdictional area. No additional mitigation measures are proposed for impacts to wetlands and riparian resources since the proposed project is primarily within the footprint of the Water Agency's existing facilities and since the purpose of the proposed activities is to improve passage for threatened and endangered fish species 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 the Russian River 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 passage in the project area is anticipated to improve as a result of the project. The project site is located at an existing Water Agency facility along the Russian River which receives daily vehicle traffic and operation noises at the site. Construction activities are not anticipated to significantly increase the potential to restrict wildlife movements in the project area. Any potential disturbance that occurs as a result of construction activities will be temporary (June-October), is limited to the project site, and alternative wildlife corridors around the project site exist in the area.

Water Agency biologists⁴ conducted dipnet surveys for California freshwater shrimp (a state and federally listed endangered species) on May 18, 2012 along bank vegetation in the project area. No shrimp were found and no undercut banks greater than 6-inches were found. Based on negative survey findings, lack of suitable winter refugia, marginal summer habitat, and an abundance of predatory fish there is no suitable habitat for the California freshwater shrimp in the project area.

- 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*.

⁴ David Cook and Andrew Moratto - under federal permit TE-808241-4 and state Scientific Collector's Permit SCP-514.

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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5? (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries? (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) An archaeological investigation of the project site did not identify any cultural resources within the project area. The majority of the project area has already been excavated when the existing facilities at the project site were constructed. 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 MFSFL-7: *The project specifications will require the contractor to comply with the 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2) Strong seismic ground shaking? (2,9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3) Seismic-related ground failure, including liquefaction? (2,9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Landslides? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) 1) Regional geologic mapping show an unnamed fault strand immediately adjacent to the project area. This fault strand is indicated as having been last active in the Early Quaternary period (700,000 to 2,000,000 years ago); however, due to presence of the San Andreas, Rodgers Creek, and Maacama faults within Sonoma County, the entire project area could be subject to seismic ground shaking as a result of a large earthquake along one of these faults. Seismic hazard analysis prepared for the Water Agency's water supply facilities identifies a potential risk to some of the water supply facilities at Mirabel due to liquefaction and lateral spread of the gravel banks of the Russian River during a large seismic event. The proposed project will be designed with these seismic concerns considered to minimize potential risks to employees or the public in the event of a seismic event. The stability necessary for the proposed fish ladder and fish screen project may also provide incidental seismic stability

for existing adjacent Water Agency facilities (e.g., the existing River Diversion Station building immediately adjacent to the project area). 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.

- 2) 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.
 - 3) 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.
 - 4) Please refer to Item a1 above. The project area is located in a valley away from 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 primarily the removal of existing structures and re-building new structures in relatively the same footprint. The proposed facilities will extend both farther upstream and downstream than the existing facilities, and a longer access road will be installed. 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. The project is not anticipated to result in any significant impacts due to soil erosion.
 - c) The project site is located in an area that is alluvial material and saturated due to the year-round flows in the Russian River. It is an area subject to liquefaction potential. However, as noted above in a1, 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. As noted in a1 above, the proposed project may actually reduce risks of liquefaction as a result of improved soil stability in the project area. 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 Russian River 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, because of the project's proximity to the Russian River, soils in the project area are likely to stay saturated throughout the year which would limit any potential shrinking and swelling of the soil. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) Construction activities would require equipment such as vehicles and generators that would generate greenhouse gas emissions. Operation and maintenance of the proposed facilities is not anticipated to require any additional vehicle trips over what currently occurs for the existing facilities at the site. Vehicle trips associated with construction activities is not anticipated to result in a substantial increase in traffic in the Russian River corridor. The project itself would not generate any greenhouse gas emissions.

Construction will require a variety of heavy equipment and machinery. The Water Agency anticipates that construction elements such as the cofferdams, sheet piling, and steel concrete reinforcement mat handling will require a 20 to 35 ton crane, as well as a diesel operated vibratory sheet pile driver. One to two excavators, a skip loader, bulldozer, backhoe, and a 10 wheel dump truck will likely be used for grading and excavation.

Concrete trucks will deliver batched concrete, and a truck-mounted concrete boom pump will be used to place the concrete. A sheepsfoot vibratory compactor will be used to compact the subgrade prior to placement of concrete foundation structures.

Projected gasoline and diesel use for the proposed project was estimated based on the Water Agency's experience with construction projects of similar scope. Based on the estimates, diesel use will be approximately 5,625 gallons and the gasoline use will be approximately 1,875 gallons.

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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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) The Water Agency has owned and operated for water supply purposes the project area for approximately 40 years. The soils of the project site have been excavated as part of past construction activities during the building and maintenance of the existing facilities at Mirabel. No hazardous wastes are anticipated to be encountered during the construction of the proposed project. 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 the Russian River. 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 MFSFL-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 MFSFL-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 1 mile south 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 3.5 miles west of the Charles M. Shulz-Sonoma County 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 Water Agency 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (11)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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? (2,11)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 the Russian River. 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) A slight temporary increase in turbidity of the river immediately below the site would occur as the temporary cofferdams are installed or removed during construction. Work will be performed under the terms of the water quality certification issued by the California North Coast Regional Water Quality Control Board. To further minimize water quality concerns the project specifications will provide that equipment shall not be operated in the stream channel of the flowing live stream except as may be necessary for the construction of the proposed temporary cofferdams. Anticipated increases in turbidity during construction would be of short duration and minor in nature; therefore, no significant impacts to water quality are anticipated as a result of the proposed project. 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. The proposed project would not result in any significant barriers to groundwater infiltration. The Mirabel Dam facility, as it currently exists and as it would exist after project construction, is intended to facilitate groundwater recharge as part of the Water Agency's water supply facilities.
- c) The proposed project will require short-term construction related disturbance to the channel bank of the Russian River in the area of the existing Mirabel Dam. Construction activities would include the implementation of erosion control Best Management Practices such as silt fencing, erosion control fabrics, mulching, wattles, hydroseeding, and revegetation. Upon completion of construction, all disturbed surfaces would be covered. The project would not alter any drainages or the flow of the Russian River
- d) Refer to the Items VIII a, b, and c above. The proposed project involves the modification of an existing facility along the Russian River. The proposed project design would not result in a substantial change to 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 intended to improve aquatic habitat within the Mirabel Dam area by improving the fish screening at the Water Agency's diversion intake and by providing improved passage past the Mirabel Dam. As noted in Item VIII a) above, short-term turbidity increases may occur during construction activities. Operation of the proposed project would not result in any changes to water quality.
- g) The proposed project would not include the construction of housing.

- h) The Mirabel Fish Screen and Fish Ladder Replacement Project proposes work within a FEMA regulated floodway and requires consideration of hydraulic impacts of improvements. Hydraulic analysis of the proposed post-project conditions revealed no increase in 100-year base flood elevations associated with project development. Based on the analysis performed, the Project complies with federal and local regulatory requirements for an encroachment within a floodway. A FEMA No-Rise certificate could be prepared for this project. The Water Agency will confirm that proposed facilities are constructed as designed and analyzed in order to verify that the constructed facilities will not result in any increase in flood levels. have a No-Rise condition.
- i) Please refer to Item VIII h). The proposed project includes the modification of existing facilities along the channel bank of the Russian River at the Water Agency's Mirabel Dam. The proposed project is not expected to result in any significant changes from existing conditions in how the Mirabel Dam is operated
- 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) No gravel mining operations are currently operating in the vicinity of the project site, 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 not alter from existing conditions the continued natural movement of gravel and sediment through the project area during high flows. Construction would also occur during the summer low-flow period when bedload movement in the Russian River 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 the Russian River. 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? (2,12)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 diversion of stream flows is required. The overall project area is an agricultural setting with the closest residences 0.3 mile from the Mirabel Dam site. 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 temporary 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 3.5 miles from the Charles M. Schulz-Sonoma County Airport; however, the Charles M. Schulz-Sonoma County 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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. The proposed project would not expand the Water Agency's delivery capacity or modify its water rights to allow for any increase in water diversions.
- 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Police protection? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Schools? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Parks? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Other public facilities? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 consist of the modification of an existing publically owned water supply facility. The proposed changes in the facility are to enhance fish passage at the site.

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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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. The Russian River is a popular destination for canoeing and kayaking. People using the Russian River in the project area are required under existing conditions to portage around the Mirabel Dam when it is in use. During construction, the portage location would be relocated to an upstream location where the temporary cofferdam near the Wohler Bridge would be located. Canoes and kayaks would be allowed to continue through the project area without portaging a second time at the Mirabel Dam; therefore, the proposed construction activities would not significantly alter canoe or kayak passage.

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? (2,13)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) Construction activities would all occur outside of roadways and within property owned by the Water Agency. However, construction vehicles may cause a short-term delay of traffic along Wohler Bridge, Wohler Road, and Westside Road, as vehicles enter and exit the project site. It is not anticipated that the short-term increase in traffic related to construction vehicles accessing the project site would substantially increase traffic or cause traffic congestion in relation to the capacity of the road. Wohler Road and Westside Road are designated as Rural Major Collectors. 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 Westside Road or Wohler 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Comply with federal, state, and local statutes and regulations related to solid waste? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 construction debris would be disposed at a nearby landfill or an appropriate recycling facility. Excess soils would be stockpiled within an existing material stockpile location within the Water Agency's property at Mirabel.
- g) The proposed project would require the disposal of construction-related debris. 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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION OF POTENTIAL IMPACTS

- a) The proposed project is designed to increase fish passage, improve fish screening, and enhance fisheries monitoring and education opportunities at the Water Agency's Mirabel Dam facility. The project meets, in part, requirements of the Russian River Biological Opinion designed specifically to reduce the Water Agency's operations that result in adverse impacts to Endangered Species Act listed fish populations. 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. Modification of fish screens and providing an improved fish ladder design at Mirabel is intended to minimize or remove one potential limiting factor impacting the life histories of listed salmonid species in the region. Combined with the other components of the Russian River Biological Opinion, the proposed project is anticipated to contribute to a long-term cumulatively beneficial impact designed to contribute to the recovery of steelhead, Chinook and coho salmon in the Russian River.
- 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 the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: _____



Grant Davis - General Manager

Date: 11-26-12

SUPPORTING INFORMATION SOURCES

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2. Professional observations and judgment of the document preparer and other Water Agency staff.

3. California Department of Conservation. Division of Land Resource Protection. Farmland Mapping and Monitoring Program. *Sonoma County Important Farmland 2008* Map. <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/son08.pdf>
4. California Air Resources Board. 2011 State Area Designation Maps. <http://www.arb.ca.gov/desig/adm/adm.htm>
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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. Hagensieker, B.A. and Janine M. Loyd, M.A./R.P.A. *A Cultural Resources Survey for the Mirabel Fish Screen and Fish Ladder Replacement Project near Forestville, Sonoma County, California*. Tom Origer and Associates. July 27, 2012.
9. Brunsing Associates, Inc. *Geotechnical Investigation - Mirabel Fish Screen and Ladder Replacement Project, Santa Rosa, California*. September 28, 2011 (draft).
10. United States Department of Agriculture. Soil Survey - Sonoma County California. 1972.
11. HDR Engineering, Inc. *Mirabel Fish Screen and Fish Ladder Replacement Project - Preliminary FEMA No-Rise Report*. April 2012.
12. County of Sonoma Permit and Resource Management Department. *Sonoma County General Plan 2020. Noise Element*. 2008.
13. County of Sonoma Permit and Resource Management Department. *Sonoma County General Plan 2020*. Figures CT-4c and CT-4d - Roadway Classifications. 2008.