

Attachment 2. Project Narrative Template

Project Title: South Canal Diversion Fish (SCDF) Screen

Applicant Name: Yuba County Water Agency (YCWA)

Project acreage restored, enhanced, or protected: The California State Wildlife Action Plan (CDFW 2015b) recognizes that anadromous fish have complex geographic ranges spanning many biological provinces; therefore, determining the beneficial effects of this project by acreage is difficult, particularly when these fish have secondary benefits to other species, both terrestrial and aquatic. We have therefore taken the conservative approach of applying an enhanced/restored acreage figure to include the lower Yuba River (downstream of Englebright Dam to the confluence of the Feather River, with a 10-meter buffer on either side), yielding 420 enhanced acres.

Executive Summary/Abstract

Yuba County Water Agency (YCWA) seeks a Planning Grant to improve protection of anadromous salmonids in the lower Yuba River at the South Canal Diversion, with National Marine Fisheries Service (NMFS) and California Department of Fish and Wildlife's (CDFW) approval, while also maintaining water deliveries to downstream irrigators, and minimizing maintenance and repair costs. The proposed project will improve the existing South Canal Diversion Fish Screen to address the "Protect and Restore Anadromous Fish Habitat" funding priority of the Proposition 1 Watershed Restoration Grant Program. This project will also promote *California Water Action Plan 2016 Update* goals by implementing a project on CDFW's 2015 Priority Unscreened Diversion List for the Central Valley and Delta (2015 List), and implements the Yuba Accord's purpose to support healthy habitats for Chinook salmon and steelhead in the lower Yuba River.

Several evaluations intended to test the effectiveness of the existing barrier have been completed. These studies demonstrated that juvenile salmonids have been collected behind the rock gabion fish barrier with no ability to re-enter the Yuba River.

Substantial feasibility analyses and preliminary alternatives comparisons have been made to assure the proposed project will address the problem at appropriate levels of efficacy and scale. Three action alternatives considered in the current CEQA evaluation were drawn directly from several alternatives considered in the *Expanded Feasibility Study for the South Canal Diversion Fish Screen: Evaluation and Comparison of Alternatives* (RBI 2015). Each would provide additional protection for juvenile salmonids; each would offer relatively high cost-effectiveness; and each considers maintenance and flooding issues.

The proposed fish screen project has had a long history. One aspect of this involves the irrigation entities (YCWA Member Units) served by the canal. Once the planning phase is complete, YCWA will call upon the Member Units to assist in the construction cost of the preferred alternative. The Member Units have been wary of the project, primarily because it will raise the cost of business to their constituency in the form of higher irrigation fees. To address these concerns, YCWA is pursuing this planning grant to help defray potential cost increases to the Member Units. A show of support, and thus partnership, from CDFW's Prop1 program will display this public partnership, as well as maintain the positive momentum project proponents have recently achieved.

In recent months, the CEQA process has neared the half-way point, and support for the project has been offered both from agricultural and conservation stakeholders. Three action alternatives currently are being considered to improve the facility under the CEQA process. It is proposed to complete NEPA, permitting and design activities under this Planning Grant by March 2018, and to implement construction soon thereafter.

Introduction and Purpose:

Purpose: The project's purpose is to complete environmental compliance (CEQA/NEPA), identify the preferred project, design the project, and obtain permits, resulting in a "shovel ready" project that will improve protection and reproductive success of anadromous salmonids in the Yuba River at the South Canal Diversion, while also maintaining water deliveries to irrigators and minimizing long-term maintenance and repair costs.

Why the Project is Necessary:

Solicitation Priority: The proposed project addresses the "Protect and Restore Anadromous Fish Habitat" funding priority of the Proposition 1 Watershed Restoration grant program.

California Water Action Plan Goals: Improving the fish screen will promote and implement the following goals of the *California Water Action Plan 2016 Update*:

- *Goal 4. Protect and Restore Important Ecosystems* (pg. 10), sub-goal – *Eliminate Barriers to Fish Migration* (pg. 13). A part of this goal is specifically aimed at implementing projects on CDFW's 2015 Priority Unscreened Diversion List for the Central Valley and Delta. The South Canal Diversion Fish (SCDF) Screen project has been documented as a priority repair/replacement of existing water intake screens on CDFW's 2015 Priority List (previously called the Yuba-Brophy [South Diversion]).
- *Goal 9. Increase Operational and Regulatory Efficiency* (pg. 19), sub-goal - *Prepare for the Future through Better Technology and Improved Procedures* (pgs. 19-20). The proposed project will use state-of-the-art fish screen technology to improve anadromous fish protections and prepare for a future where additional threats and stressors are anticipated, especially due to climate change.

Specific Problems, Issues, Questions, Critical Unknowns the Project Addresses: The South Canal Diversion and associated rock gabion fish barrier (previously referred to in other documents as the Yuba-Brophy [South Diversion] Fish Screen, and as the Brophy-South Yuba Fish Screen) were constructed in 1985 under a 1984 agreement between the South Yuba Water District and the then California Department of Fish and Game (SYWD-CDFG1984), hereinafter referred to as the 1984 Agreement. Following construction of the rock gabion fish barrier, and per the 1984 Agreement, several evaluations intended to test the effectiveness of the barrier were completed. These studies demonstrated that juvenile salmonids have been collected behind the rock gabion fish barrier with no ability to re-enter the Yuba River (CDFG 1988; USFWS 1990; SWRCB 2001; and USACE 2001). How these fish came to be present in the pond behind the rock gabion fish barrier is not known. Due to the large size of many of the fish found in the pool, two schools of thought have emerged: 1) that the fish could not have passed through the barrier and many or all of these fish were washed over the top of the gabion structure during high flow events, or 2) the small fish may have been able to pass through voids in the existing mesh barrier (NMFS 2002). As a result, CDFW has included this screen upgrade on its 2015 Priority Unscreened Diversion List for the Central Valley. Further, the small island that was created when the South Canal Diversion channel was constructed has eroded over time, causing increased release of sediment into the lower Yuba River as well as increased overtopping of the existing fish screen structure during peak flows.

According to the State Wildlife Action Plan (CDFW 2015b), the conservation targets relevant to this application are spring-run Central Valley Chinook salmon listed as threatened species under both State and federal Endangered Species Acts (ESAs), and steelhead trout, listed as a threatened species under the federal ESA. The State Wildlife Action Plan states: "NMFS has estimated that over 75 percent of Central Valley anadromous habitat has been lost for Chinook salmon, steelhead trout, and green

sturgeon,” and recognizes one of the threats to anadromous salmonids in the subject ecoregion as dams and diversions that “*block fish movement to upstream habitat, remove fish and wildlife habitat, alter water quality (i.e., temperature and flow), and kill fish through entrainment and entrapment.*” The fish screen project addresses this State Wildlife Action Plan-identified issue.

How the Proposed Project Will Address the Problems: YCWA proposes to upgrade or replace an existing rock barrier fish screen at the South Canal Diversion on the lower Yuba River in Yuba County so that the upgrade or new screen will meet the fish-screen criteria of the National Marine Fisheries Service (NMFS) and CDFW. Three action alternatives considered in the current CEQA evaluation were drawn directly from several alternatives considered in the *Expanded Feasibility Study for the South Canal Diversion Fish Screen: Evaluation and Comparison of Alternatives* (RBI 2015). Each alternative would provide additional protection for juvenile salmonids; each would offer relatively high cost-effectiveness; and each considers maintenance and flooding issues.

It is also proposed to restore and reinforce the island associated with the diversion so that the new fish screen will have a greater level of protection from flood damage, and the release of sediment from the island will be greatly reduced. It is expected that secondary benefits would accrue as well to seven species included on the State Wildlife Action Plan Species of Greatest Conservation Need list: Prickly sculpin (*Cottus asper*), Sacramento Blackfish (*Orthodon microlepidotus*), Sacramento pikeminnow (*Ptychocheilus grandis*), California roach (*Hesperoleucus symmetricus*), Sacramento sucker (*Catostomus occidentalis*), three-spine stickleback (*Gasterosteus aculeatus*), and rainbow trout (*O. mykiss*), as well as 35 additional native and non-native fish species (YCWA 2012).

Previous studies, particularly the 2015 Feasibility Study prepared by Robertson-Bryan, Inc., (RBI 2015) assure that the identified problem (inadequate protections for anadromous fish) and project goals and objectives, listed under Goals and Objectives below, will be addressed by the Project.

In summary, substantial feasibility analyses and preliminary alternatives comparisons have been made to assure that the proposed project will address the problem at appropriate levels of efficacy and scale. This grant application would fund the environmental compliance, design, and permitting tasks necessary to enable the SCDF Screen to be constructed in the near future.

Description of Relevant Studies and Information: The following early studies and analyses (Baseline Studies) substantiate the problems and unknowns the project is meant to address. Additional information about critical analyses and decisions that have affected the Project is provided under Project History.

Baseline Studies

Following construction of the rock gabion fish barrier, several evaluations intended to test the effectiveness of the barrier were completed between 1985 and 2002. In 1988, CDFG conducted a mark-recapture study to: 1) evaluate the effectiveness of the rock gabion fish barrier, and 2) determine whether bypass flows were at least 10 percent of the diverted quantity. The results of the CDFG study determined that less than 95 percent of marked juvenile Chinook salmon made it through the bypass canal and suggested losses of juvenile salmonids at the South Canal Diversion were between 40 and 60 percent.

An electrofishing survey of the diversion pond was conducted by CDFG in March 1987. This electrofishing survey captured three juvenile Chinook salmon behind the barrier prior to diversions from the river (Preston 1987, as cited in CDFG 1988). In April 1989, US Fish and Wildlife Service (USFWS) seined 31 juvenile Chinook salmon ranging in size from 46 to 70 mm fork length in the diversion pond area behind the rock gabion fish barrier (USFWS 1990; SWRCB 2001). To determine whether juvenile fish were passing through the rock gabion barrier, Demko and Cramer (1992, as cited in USACE 2001)

deduced, as did the USFWS in the 1989 study (USFWS 1990), that fish were not passing through the porous dyke, but rather that a small number of fish passed into the diversion pond during winter periods of high flows that over-topped the rock gabion barrier (USACE 2001). The State Water Resources Control Board (SWRCB) (2001) suggested that fish, including listed species, continued to be lost from the lower Yuba River at the South Canal Diversion rock gabion barrier.

Feasibility Studies for Improving the Diversion and Fish Screen

In 2005, YCWA contracted with Montgomery Watson Harza Americas, Inc. (MWH) to conduct a feasibility study to investigate developing new fish screening facilities at the South Canal Diversion, resulting in the *Feasibility Study for the South Diversion Fish Screen* (MWH 2009). The process resulted in the selection of three potential V-screen fish screens, ranging in cost from approximately \$25.7 to \$30.9 million (in 2013 dollars).

In 2014, YCWA contracted with R2 Resource Consultants, Inc. (R2) to develop additional fish screen alternatives that would have lower costs and smaller footprints, while providing similar or better fish protection. The *Yuba River–South Canal Diversion Fish Screen Alternatives Feasibility-Level Design Report* (R2 2014a) proposed a total of five additional fish screen alternatives, one that would refurbish the existing rock gabion fish barrier and four new alternatives, each of which would modify the existing diversion, and which ranged in cost from approximately \$2 million to \$7 million (in 2013 dollars). During development of the above Feasibility Report, questions were raised about potential damage and maintenance issues that might be associated with the barrier, diversion channel, and screen facilities under high flow conditions. As a result of these questions, YCWA contracted with R2 to prepare a technical memorandum that assessed the risk of high flow conditions to the fish screen alternatives and supporting infrastructure (R2 2014b).

During preparation of their respective feasibility studies (MWH 2009; R2 2014a), both MWH and R2 conducted site visits to determine which fish screen technologies, based on their respective technical expertise and effective designs used in California and elsewhere, would be best suited to the project site. MWH and R2 then reviewed and refined these applicable technologies, and subsequently developed their recommendations based on best professional judgment.

In 2014, YCWA recognized that an objective approach for evaluating and comparing the various fish screen alternatives was necessary. YCWA contracted with RBI to prepare an evaluation and comparison of eight fish screen alternatives. This resulted in the *Expanded Feasibility Study for the South Canal Diversion Fish Screen: Evaluation and Comparison of Alternatives* (RBI 2015).

Because water diversions are sources of entrainment and mortality of juvenile fish and are thought to be a contributing factor to the decline of listed fishes in California, the CDFW, under Fish and Game Code Sections 5980, 6020, and 6100, takes action to require water diversions, which affect fishery resources, to be screened. As a result, fish screening technologies have been greatly advanced in recent decades, leading to a range of fish screen options that have been used successfully in a wide variety of aquatic habitats in California. The California Fish Passage Assessment Database Project lists approximately 150 screened diversions in the Sacramento watershed and Delta, including over 10 in each of the Yuba and Feather Rivers that meet current CDFW and NMFS screening criteria for salmon, steelhead, or delta smelt (California Fish Passage Assessment Database 2016).

Regional Significance: In March 2008, after a lengthy, multi-year process, the SWRCB approved the revised instream flow requirements and other provisions of a consensus-based, comprehensive program known as the Lower Yuba River Accord, to protect and enhance 24 miles of aquatic habitat in the lower Yuba River. The Accord included a fisheries agreement that, after three years of negotiation and a rigorous and collaborative effort, established in-stream flow requirements for the lower Yuba River's salmon and steelhead habitat. The Fisheries Agreement is based on a detailed scientific analysis,

including a full evaluation of the various life stages of fall-run and spring-run Chinook salmon and steelhead, and settled longstanding disputes about adequate streamflow, flow fluctuations, and water temperatures.

Today the Accord is fully operational and continues to balance multiple river uses and benefit fisheries resources. Page 38 of the Accord's Fisheries Agreement (<http://www.ycwa.com/res/docs/FisheriesAgreement.pdf>) addresses Habitat Improvement Actions that "...potentially include a multitude of activities that address ecosystem functions needed to support healthy habitats which, in turn, support Lower Yuba River fish resources." While the fish screen project is not specifically listed in the document, it will implement the Accord's spirit and purpose to support healthy habitats for Chinook salmon and steelhead.

"The Fisheries Agreement also includes the Monitoring and Evaluation Program" (M&E Program). The M&E Program includes a framework for multiple studies identified by the RMT as necessary to evaluate and monitor the Lower Yuba River for key salmonid habitat and population performance indicators. These annual studies, in part, will be useful in the effectiveness monitoring for this Project.

Project History/Need for CDFW Funds:

History of the South Canal Diversion Fish (SCDF) Screen: YCWA owns and operates the South Canal Diversion Facility, located along the south bank of the lower Yuba River, about 1,000 feet upstream of Daguerre Point Dam and nine miles northeast of Marysville, California (see **Attachment 9, Figure 1**). This facility was constructed in 1985. The South Canal Diversion currently provides water deliveries to the South Yuba Water District, Brophy Water District, Dry Creek Mutual Water Company, and Wheatland Water District (collectively referred to as the Member Units – all of whom have provided Letters of Support). Based on the historical diversion and canal flows, and methods of adjusting for changes in irrigated lands over time, Grinnell (2012) estimates the current peak design flow rate at 400 cfs and the peak future design flow rate (i.e., to meet the anticipated expansion of surface water deliveries) at 500 cfs.

The existing diversion facility includes a permeable rock gabion barrier intended to prevent fish from entering into the diversion. Surveys indicate that the top elevation of the trapezoidal, rock gabion fish barrier ranges from 130.5 at the center to 131.5 at the ends (R2 2014a). Within the rock gabion structure is a layer of fine-meshed geotextile fabric, about 12 inches below the upstream surface of the barrier, to prevent juvenile salmonids from passing through and becoming entrained behind the barrier. Even though the barrier design was deemed adequate under the previously mentioned 1984 Agreement, it does not meet current fish-screening criteria promulgated by the NMFS or CDFW.

The South Canal Intake has a diversion channel that diverts water from the river to the rock gabion barrier and a bypass channel along the upstream face of the barrier that allows a portion of the diverted flow to bypass the barrier and discharge back into the river about 200 feet upstream of Daguerre Dam. Water that percolates through the barrier enters a large headpond that has a gated outlet structure that delivers the screened water to the head of the canal system that serves the Agency's member units.

Since the SCDF Screen was installed, several relevant processes and decisions have ensued, contributing to the history of the SCDF Screen project:

- March 2002, NMFS issued a Biological Opinion (BO) that analyzed the effects of US Army Corps of Engineers' (USACE's) operations of Englebright and Daguerre Point on threatened Central Valley spring-run Chinook salmon and threatened California Central Valley steelhead. The BO stated that, based upon ongoing concerns about juvenile Chinook salmon, USACE must

implement interim as well as long-term improvements to the South Canal Diversion to reduce impacts of the facility on juvenile salmonids.

- July 16, 2003, the SWRCB issued Revised Water Right Decision 1644 (SWRCB 2003). RD-1644 was the result of an evidentiary hearing process to address several stakeholders' complaints regarding in-stream flow requirements, water rights permits, and the adequacy of protection for the fishery resources of the lower Yuba River. RD-1644 directed YCWA, the South Yuba Water District, and the Brophy Water District to develop a plan to reduce fish losses at the South Canal Diversion and to comply with all applicable requirements of the federal and State ESAs.
- November 21, 2007, a final BO was issued analyzing the effects of long-term continuation of operations at Englebright and Daguerre Point Dams on the Yuba River into the foreseeable future (NMFS 2007). This BO included a conservation statement that: "The Corps will coordinate with YCWA, the Brophy Irrigation District, NMFS, DFG [CDFW], and the FWS [USFWS] to conduct a feasibility study to investigate the potential design, location, and costs of a replacement screen at the South Yuba/Brophy diversion that will meet all current DFG and NMFS fish screen criteria for anadromous salmonids. This effort is already underway, and the group is currently in the process of selecting its final alternative to meet the screen criteria."
- July 8, 2010, a federal judge determined that the NMFS 2007 BO was inadequate. NMFS was directed to provide a more explicit analysis of effects to the species, including how the species would be able to tolerate cumulative effects.
- September 2011, YCWA contracted with the consulting team of Robertson-Bryan, Inc. and Ascent Environmental to begin the CEQA process. Early in the process it was determined that the range of fish screen alternatives was inadequate, due primarily to the high costs, singular designs, and extensive footprints of the alternatives described in the *Feasibility Study for the South Diversion Fish Screen* (MWH 2009). It was concluded that there were innovative fish screen designs which were not considered in the 2009 Feasibility Study that could offer similar or better levels of fish protection at substantially lower costs. Subsequently, YCWA sought qualified consultants to prepare a second feasibility study to evaluate additional alternatives alongside the 2009 V-screen alternatives. This resulted in a delay of the CEQA process.
- February 29, 2012, NMFS issued a BO that analyzed the effects of the continuation of operations at Englebright and Daguerre Point Dams. Specific to the South Canal Diversion, the BO stated that there were potential non-compliance screening criteria issues associated with the diversion structure including: 1) screen space size (i.e., 3/32-inch mesh size), 2) screen porosity, 3) uniformity of approach velocity, 4) sweeping flow, and 5) cleaning frequency. The BO went on to state that additional issues associated with the South Canal Diversion structure included predation in the channel that leads to the diversion and at the face of the rock gabion barrier, and overtopping of the barrier and subsequent entrainment of juvenile salmonids behind the barrier. As a result of these concerns, NMFS included a Reasonable and Prudent Measure to reduce entrainment and impingement of spring-run Chinook and Central Valley steelhead that result from the South Yuba/Brophy diversion license.
- January 9, 2013, YCWA filed a lawsuit against NMFS and USACE challenging the February 29, 2012 BO, and on August 13, 2013, the US District Court ordered NMFS to complete a new BO. On May 12, 2014, as required, NMFS issued a new, final BO that superseded the 2012 BO. The 2014 BO does not contain any Reasonable and Prudent Measures associated with the South Canal Diversion facilities.

Current Project Status: As noted above, the proposed fish screen project has had a long and complex history. In recent months; however, the project has achieved substantial momentum: Feasibility studies

and cost-benefit analyses are complete, the CEQA analysis process is nearing the half-way point, and support for the project has been offered both from agricultural and conservation stakeholders. YCWA is requesting funding for the planning phase of this project. To the Applicant’s knowledge, this planning project is not related to any other CDFW-funded projects.

Currently, three project alternatives are being considered to improve the facility under the CEQA process, initiated in January 2016 and expected to be complete by August 2017. The Notice of Preparation was sent out in January 2016, Public Scoping was conducted in February, and analysis and EIR preparation informed by Public Scoping is now underway.

Plans for Future Project Phases: Table A-1 lists the future critical project phases and their funding and implementation strategies.

Table A-1. Critical Project Phases, Funding, and Implementation			
Phase	Timeframe	Funding Source	Implementation
CEQA process	January 2016 through August 2018	YCWA and Member Units	RBI and Ascent Environmental are conducting this process
NEPA process	June 2017 through March 2018	YCWA, Member Units, potential Prop 1 Funds	Assumed RBI and Ascent Environmental
Environmental Permits	Summer 2017 through March 2018	YCWA, Member Units, potential Prop 1 Funds	Assumed RBI and Ascent Environmental
Engineering design and pre-construction	Spring 2017 through March 2018	YCWA, Member Units, potential Prop 1 Funds	YCWA to contract with a consulting design and engineering firm (R2)
Project construction	Late Spring/Early Summer 2018 through March 2019	YCWA, Member Units, potential Prop 1 implementation grant	YCWA to contract with a construction firm

Need for CDFW Prop 1 Funds: YCWA and its Member Units have solely funded previous studies, environmental compliance, and fees associated with replacement of the fish screen. The Member Units are made up of small districts and water companies with limited funds to pay for large improvement projects. The vision statement of the State Wildlife Action Plan (CDFW 2015b), includes the statement that CDFW will: *“Promote partnerships with federal, state, and local agencies; tribal governments; and non-governmental organizations with aligned conservation goals to leverage efficient use of funding and other public resources.”* In this case, CDFW’s and YCWA’s conservation goals are in alignment, and YCWA is offering a 42 percent project cost-share (see **Attachment 4, Applicant Budget and Cost Share Table**), a substantial leveraging of public funding. Funds awarded under CDFW’s Prop 1 program will allow YCWA and its Member Units to redirect some of their project planning monies toward project construction, helping to reduce possible construction delays due to financing.

More importantly; however, is the public partnership that would be exhibited by a Prop 1 planning grant award. Once the planning phase is complete, YCWA will call upon the Member Units to assist in the construction cost of the preferred alternative. The Member Units have been and continue to be wary of the costs and risk of the project, primarily because it will raise the cost of business to their constituency in the form of higher irrigation fees. They contend there should be some public cost-share in recognition of the public benefit achieved by the fish screen project. Such funding would also maintain the positive momentum project proponents have recently achieved.

YCWA’s due diligence in pursuing appropriate planning and eventually construction funding sources to help defray potential cost increases addresses the Member Units’ concern, and helps address the fish

screen project's Goal 2. *Maintain affordable and reliable water deliveries to the South Yuba County Member Units*, below

If no funds were available from CDFW, then YCWA and its Member Units would have to seek budget approval from its members for all associated project planning costs. The Member Units ongoing concerns about future costs and risks could cause potential further delays to project implementation.

If the project is not implemented in the near future, the observed impacts on salmonid habitat will continue and this opportunity of expediting implementation of the goals and spirit of the State Wildlife Action Plan vis-à-vis anadromous fish will be lost in the short term. Implementation of other relevant plans' goals aimed at anadromous salmonid recovery and enhancing the biological health of the lower Yuba watershed would be lost as well.

Goals and Objectives

The following project-specific goals and objectives are meant to: 1) protect juvenile anadromous fish in the Yuba River by improving the South Canal Intake; 2) help reduce the financial burden from planning the fish screen on small, local irrigation entities (by securing public funding for a portion of the project's costs), while anticipating and maintaining their ability to receive and deliver water during the project construction season; and 3) design a project that is cost-effective to operate and maintain (including periodic flood damage) so that associated costs do not become a burden on YCWA and its Member Units (by determining cost-effectiveness through previous studies and the NEPA and CEQA processes). Completing the planning aspects of environmental compliance (CEQA/NEPA), identifying a preferred alternative, designing the project, and obtaining permits will contribute to implementing the project goals.

Goal 1. Ensure suitable protections for anadromous fish in the Yuba River at the South Canal Diversion

Objective 1.

Modify the South Canal fish screen structure design to meet current fish-screening criteria after the CEQA and NEPA processes have identified the preferred alternative.

Goal 2. Maintain affordable and reliable water deliveries to the South Yuba County Member Units.

Objective 1.

Seek alternative funding, such as a Watershed Restoration Grant, to help reduce the financial impact of fish screen upgrades on individual Member Units, and offer substantial YCWA funding as cost-share to the grant.

Objective 2.

Work with the South Member Units to assure that irrigation season schedules are accounted for when determining construction design (2017-2018) and build periods (2018-2019) to prevent irrigation water delivery disruptions.

Goal 3. Minimize maintenance and repair costs associated with a fish screen facility at the South Canal Diversion, including repair costs associated with potential flood damage.

Objective 1.

Closely assess in CEQA and NEPA documents the tradeoffs as well as the estimated costs for repair and maintenance for each alternative.

Site Description

The South Canal Diversion is located on the south bank of the Yuba River approximately 1,000 feet upstream of Daguerre Point Dam, about 11.5 miles upstream of the Yuba River's confluence with the Feather River (see **Attachment 9, Figures 1 and 2**). Ongoing mining and gravel extraction operations lie in the Yuba Goldfields to the south, east, and west. The site is designated for Extractive Industrial land

uses in the Yuba County General Plan. This land use designation identifies areas where significant and commercially viable mineral and aggregate resources are located and protects those areas from the encroachment of incompatible uses. The terrain at the project site includes flat areas with some gently rising hills. Land cover types at the project site are described below.

Mixed Oak Woodland: The primary habitat type within the project site and surrounding area is mixed oak woodland that supports several species of oak, including valley oak (*Quercus lobata*), blue oak (*Q. douglasii*), and live oak (*Q. agrifolia*), and an understory of primarily non-native annual grassland.

Riparian: Riparian habitat in the project vicinity is associated primarily with the Yuba River, the South Canal Diversion, and adjacent diversion ponds. Common tree species in riparian habitat include: valley oak (*Quercus lobata*), Fremont cottonwood (*Populus fremontii*), box elder (*Acer negundo*), common fig (*Ficus carica*), and willow (*Salix sp.*). Understory shrubs include Himalayan blackberry (*Rubus discolor*), California grape (*Vitis californica*), blue elderberry (*Sambucus nigra ssp. caerulea*), poison oak (*Toxicodendron diversilobum*), and coyote bush (*Baccharis pilularis*).

Riverine: Riverine habitat within or adjacent to the project site includes the Yuba River, the South Canal Diversion, and adjacent ponds in the river alluvium that were created by dredging for gold. Aquatic species present in the riverine habitat include spring-run and fall-run Chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*O. mykiss*), seven species included on the State Wildlife Action Plan Species of Greatest Conservation Need list [Prickly sculpin (*Cottus asper*), Sacramento Blackfish (*Orthodon microlepidotus*), Sacramento pikeminnow (*Ptychocheilus grandis*), California roach (*Hesperoleucus symmetricus*), Sacramento sucker (*Catostomus occidentalis*), three-spine stickleback (*Gasterosteus aculeatus*), and rainbow trout (*O. mykiss*)], and 35 additional fish species, including a wide range of native and non-native fishes (YCWA 2012).

Background and Conceptual Models

Four sequential or parallel components included in the Scope of Work have been or will be informed by science to ensure development of a project that is effective in achieving anadromous fish protection in the lower Yuba River, in particular, by reducing juvenile fish mortality at the South Canal Diversion. Each component's scientific underpinning supports the next step, but allows for adaptive design should new scientific information come to light. This conceptual model will be revisited in the project's final report.

Component 1. Reviewing or Supplementing Existing Feasibility Studies and Analyses

The Project Team will review three existing feasibility studies and previous analyses of the fish screen, and research and evaluate new science and technology to determine that information is up-to-date in terms of anadromous fish and fish screen efficacy. Current conceptual designs included in the Notice of Preparation for the EIR were predicated partially on scientifically based fish screen standards and criteria developed by CDFW and NMFS.

Previously prepared feasibility studies and baseline analyses examined fish screens and flow volumes at the current South Canal site (MWH 2009; R2 2014a; R2 2014b; RBI 2015), including designs based on: 1) proven engineering standards and calculations (e.g., screen space [mesh] size), 2) screen porosity, 3) uniformity of approach velocity, 4) sweeping flow, and 5) cleaning frequency. Further, they accounted for peak flood flows and the ability of various alternatives to withstand those flows given the height of the current and alternative gabions.

It is not anticipated that further supplementation of studies would take place during the planning phase, but they could be necessary after this grant period is closed and after post-construction monitoring, if such monitoring indicated further studies were necessary.



Component 2. Environmental Compliance

CEQA and NEPA require public agencies to make a good-faith, reasoned effort, based upon available information, to identify the potentially significant direct and indirect environmental impacts – including cumulative impacts – of a proposed project or activity over a range of resource categories. The CEQA and NEPA processes require that best available science be used in the determination of potential impacts when evaluating each of the project alternatives. As part of these processes, the above cited studies will be used to ensure that a sufficient level of scientific scrutiny will be given during the CEQA process. Once a preferred alternative is determined under CEQA, the same level of scientific scrutiny will be given during the NEPA process.



Component 3. Prepare Final Design – Preferred Alternative

After a preferred alternative is determined through the CEQA process and potentially refined during the NEPA process, using scientific data submitted by stakeholders and the project proponent, project engineers will develop the final engineering design of the selected project configuration according to current standards for design of water intakes and fish screens, taking into account the project design criteria and site conditions.



Component 4. Acquiring Permits for the Future Project

Most permitting agencies for this project issue permits based on metrics intended to meet specific standards to protect human or environmental health and safety. The Project Team would perform the necessary assessments and calculations needed to meet respective permit standards. For example, a Clean Water Act 404 permit requires the applicant to provide engineering and scientific data demonstrating that any discharge of dredged or fill material will minimize potential impacts on wetlands and provide compensation for any remaining unavoidable impacts.

If a particular permit standard cannot be met as the preferred alternative is designed, a redesign of the project may be necessary.

Approach and Statement of Work

TASK 1: PROJECT MANAGEMENT AND ADMINISTRATION

Responsible Entities: YCWA, CAI, RBI, Ascent Environmental, Bartkiewicz, Kronick and Shanahan, P.C.
(BKS)

Overall Grant Administration

The project applicant (YCWA) will utilize existing senior staff for the position of Project Manager (PM), who will have direct responsibility for overseeing the grant (e.g., submitting quarterly reports and invoices, ensuring prompt payment of subcontractor invoices, ensuring that all records are kept in a manner that would support an audit, coordination with the Project Coordinator (PC) via monthly check-ins). The YCWA PM will subcontract to a PC to assist the PM. This management strategy (i.e., using both a PM and a PC) has worked very well for YCWA over the years, and millions of dollars' worth of grants and projects have been managed using this approach.

Coordination of the Subconsultants

The Project Coordinator will focus on planning, technical oversight, and coordination of the work to meet the Agency's objectives. Day-to-day coordination of the work will include as-needed email and phone communications, issue-driven telecons and meetings, monthly status calls, status reports (quarterly at minimum, monthly if required), review of interim and final documents/deliverables, periodic review of the work plan, schedule, budget, and deliverables (projected vs. actual) based on submitted reports and invoices.

Task Management by Individual Subconsultants

Each of the three project subconsultants (RBI, Ascent, and R2) will have a designated project manager whose responsibilities will include: liaison with the PC, ensuring their deliverables are on time and within budget, reviewing and approving deliverables, ensuring the quality of work is commensurate with that described both in the application and in the agreement, and participating in monthly Project Team status calls.

Deliverables

- Quarterly reports and invoices

TASK 2: ENVIRONMENTAL COMPLIANCE

Responsible Entities: YCWA, RBI, Ascent Environmental, BKS

COMPLETION OF THE CEQA PROCESS

The following will be completed prior to the initiation of the grant.

Notice of Preparation – Completed early 2016

Public Review Draft EIR/Public Meeting (including all supporting technical analysis) – To be completed prior to May 2017

The following would be completed with grant funding.

Final EIR/Required Noticing

At the close of the public review period for the Draft EIR, the RBI/Ascent Team will meet with the YCWA to review the comments received. The cost associated with this task assumes a maximum of 100 substantive public comments. Coordination will be undertaken with YCWA in the preparation of responses to the comments received on the Draft EIR. The format of the Final EIR will feature elaboration and clarifications of material in the Draft EIR developed as a result of the public review period and letters of comment organized by federal, state, regional, and local agencies and organizations, followed by individual and topical responses to the issues raised. The Final EIR will include all correspondence with a cross-reference system linking each comment to its corresponding response. The Final EIR will also include clarifications and revisions to the Draft EIR resulting from responses to comments.

CEQA requires that a response to all agencies submitting comments be provided at least 10 days prior to certification of the EIR. The RBI/Ascent Team will provide the commenting parties with the responses.

The RBI/Ascent Team will prepare the Notice of Determination for distribution to the required parties.

Deliverables

- Final EIR
- Notice of Determination

Findings of Fact and Statement of Overriding Considerations

In accordance with Sections 15091 and 15093 of the State CEQA Guidelines, YCWA legal counsel, Bartkiewicz, Kronick and Shanahan, P.C., will work with the RBI/Ascent team to prepare the Findings of Fact (FOF) for each significant effect described in the EIR, and a Statement of Overriding Considerations (SOC) if significant unavoidable impacts are identified. As required by the State CEQA Guidelines, one of three findings must be made for each significant effect and must be supported by substantial evidence in the record. The SOC (if required) will rely on input from YCWA regarding the public benefits of the proposed project. The FOF/SOC will be prepared concurrently with preparation of the Final EIR.

Deliverables

- FOF/SOC

Mitigation Monitoring and Reporting Program

The RBI/Ascent Team will prepare the Mitigation Monitoring and Reporting Program (MMRP) concurrently with the Final EIR and FOF/SOC. The MMRP will be designed to ensure compliance with mitigation measures identified in the EIR. In coordination with the YCWA, the MMRP will be prepared for mitigation measures that address significant impacts or are proposed to be adopted as conditions of approval. The MMRP will be used by YCWA to ensure that adopted mitigation measures identified in the EIR are implemented and that implementation is documented. Deliverables

- MMRP

NEPA COMPLIANCE DOCUMENT

The following would be completed with grant funding.

The appropriate environmental document to support the NEPA compliance requirements has not been determined at this time. Upon initiation of the NEPA process, the RBI/Ascent Team will coordinate and consult with the USACE to conduct scoping and determine the appropriate NEPA documentation for the project. For the purposes of this scope, it is assumed that the NEPA document will be an EIS. The format and content of the EIS will be consistent with the requirements set forth in the USACE Regulatory Program Part 325, Appendix B – NEPA Implementation Procedures for the Regulatory Program.

Because preparation of the NEPA document will follow completion of CEQA process, it is assumed that the effort to prepare the EIS will be streamlined because it will use information from and summarize and reference impact analyses presented in the CEQA document. It also is assumed that the EIS will conduct impact analyses for up to three action alternatives that are evaluated during the CEQA process. The Draft EIS will include the following subsections required by NEPA: environmental justice, relationship between short-term uses of the environment and long-term productivity, significant and unavoidable environmental impacts, and irreversible and irretrievable commitment of resources. The latter two subsections will also be included in the CEQA document.

The EIS will be released to the public through a Notice of Availability published in the Federal Register by the US Environmental Protection Agency. The RBI/Ascent Team will coordinate publishing a public notice for the proposed action and the EIS, which will be sent to all adjacent property owners, interested agencies, and the public, and will be posted on the NEPA lead agency website. The public will be given a specific period in which to comment on the EIS. Following completion of the EIS, the RBI/Ascent Team will prepare the Record of Decision for USACE staff. It is assumed that USACE staff will prepare all Federal Register notices and coordinate the internal agency approval processes for the project.

Deliverables

- Notice of Intent/Scoping
- Meetings with USACE
- Draft EIS
- Final EIS
- Record of Decision

TASK 3: PREPARE FINAL DESIGN

Responsible Entities: R2, YCWA, CAI

Project Design

R2 Resource Consultants will provide the design services. R2 performed an alternatives feasibility study and prepared a summary report in October 2014. Information from that report will be used during the alternatives selection process. R2 will be available to provide additional preliminary information if necessary during the selection process. Throughout the design process, R2 will work closely with the PC to ensure that the work is progressing on schedule and within budget, and meets the needs of the Agency.

After selection of a preferred alternative, R2 will meet with YCWA and other project representatives to tour the site and define the project requirements and detailed scope of work. A 30 percent design package will be developed providing the basic arrangement and components of the project including the fish-screening layout and features, geometric modifications to the side channel, proposed reinforcement of the protection island, and approach to sediment and erosion control measures. R2 will identify materials and vendor-provided equipment appropriate for the project, and work with vendors to ensure the components are appropriate for the intended design requirements. The submittal will include the 30 percent design drawings and a preliminary design document describing the function, components, and operation of the facility. To the greatest extent feasible, the design will meet NMFS and CDFW design criteria for fish-screening facilities. R2 will meet with YCWA, project consultants, and resource agencies to discuss any comments and recommendations concerning the 30 percent design.

All appropriate recommendations will be incorporated into the design and the design will be taken to a greater level of detail including detailed hydraulic modeling of sedimentation and erosion issues and design of mitigation details specifying screening and screen-cleaning equipment, including construction and installation detail along with mechanical and electrical (if required) needs for operation. Site improvements required (roads, access, etc.) will also be addressed at this point. A 60 percent design submittal including more detailed design drawings, an updated design report, preliminary technical specifications, and a preliminary construction cost estimate will be submitted. Again, R2 will meet with YCWA, project consultants, and resource agencies to review the 60 percent submittal and discuss any comments and recommendations.

After agreement concerning any recommendations and approval for the final design, R2 will further develop the design to an essentially complete stage adding detailed construction and fabrication requirements, completed technical specifications, and final design document. A 90 percent design package will be submitted to YCWA. Although the project will be essentially complete, this submittal will be produced to provide a final review opportunity of the completed design. R2 will attend a final design review meeting with YCWA, project consultants, and

resource agencies to ensure that all parties are satisfied and any final modifications or omissions can still be incorporated.

After incorporation of any final revisions or additions, a 100 percent, Ready-for-Contractor-Bid set of documents will be submitted. This will include the final design drawings, technical specifications, and the final construction cost estimate. The design document will be finalized as a project operations and maintenance document. R2 will assist YCWA during the contractor bidding process, and will then produce a final set of Released-for-Construction drawings sealed by a professional engineer licensed in the State of California.

Deliverables

- Preliminary Design Information as Required
- 30% Design Package
- 60% Design Package
- 90% Design Package
- 100% Design, Ready-for Contractor-Bid
- Released-for-Construction Package

TASK 4: ENVIRONMENTAL PERMITTING

Responsible Entities: YCWA, RBI, Ascent Environmental, BKS

As part of the pre-construction planning phase, the RBI/Ascent Team will develop and obtain all necessary permits. Agencies and permits include the following (Attachment 6):

- USACE Clean Water Act (CWA) Section 404
- Federal ESA Consultation: USFWS/NOAA Fisheries Section 7 Consultation
- CDFW Lake and Streambed Alteration Agreement and California ESA (CESA) permit (Incidental Take Permit)
- SWRCB CWA 401 (Clean Water Certification) and Construction Activities Storm Water Permit
- Yuba County (grading permit)
- BLM Coordination – no permit required

Each of these permit requirements is described in detail below.

Subtask 4.1: USACE CWA Section 404 Permit. All necessary background analysis will be completed as part of this effort, including conducting a jurisdictional delineation for USACE and CDFW permit applications and necessary biological resource assessments required for ESA consultations.

Ascent's wetland specialists will review existing information regarding known jurisdictional features that may be impacted by project activities, including the National Wetlands Inventory and topographic maps. They will then perform a field investigation to delineate and map the extent of waters of the United States, including wetlands, using approved methods. For wetlands, the routine onsite methods will be used as outlined in the USACE's (Corps') *Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (2010). The extent of other waters will be mapped to the Ordinary High Water Mark as defined by the Corps' *Regulatory Guidance Letter No. 05-05 Ordinary High Water Mark identification*. Other regulatory guidance documents will be used as needed (e.g., Corps' South Pacific Division public notice *Guidance on Delineations in Drought Conditions* data, February 6, 2014). Field mapping

will be performed using a GPS unit capable of sub-meter accuracy. A draft and final jurisdictional delineation report will be prepared.

Agency field visits may be required; cost includes budget for up to four (4) agency field visits.

Deliverables

- Draft Permit Applications
- Final Permit Applications
- Draft Jurisdictional Delineation Report
- Final Jurisdictional Delineation Report, including all maps and field notes

Subtask 4.2: USFWS ESA Section 7 Consultation. Ascent will prepare a draft Biological Assessment (BA) for the USACE to support the federal ESA Section 7 consultation on ESA-listed terrestrial wildlife species and critical habitat. The BA will provide an overview of the proposed project, potential adverse effects to species/habitat, and conservation measures recommended to avoid and minimize adverse effects. It is assumed that a formal BO will not be required for compliance; rather, a letter of concurrence of no adverse effect will be issued. It is further assumed that only limited in-office coordination activities with USFWS will be needed after the application submittal.

Deliverables

- Draft BA Submittal

Subtask 4.3: NOAA Fisheries ESA Section 7 Consultation. RBI will prepare a draft BA for the USACE to support the federal ESA Section 7 consultation on ESA-listed salmonid species, critical habitat, or Essential Fish Habitat. The draft BA will provide an overview of the proposed project, potential adverse effects to species/habitat, and conservation measures recommended to avoid and minimize adverse effects. It is assumed that a formal BO will be required.

Deliverables

- Draft BA Submittal

Subtask 4.4: CDFW Lake and Streambed Alteration Agreement (SAA) and CDFW CESA Section 2081 (Incidental Take Permit) Consultation. RBI will compile the necessary information and prepare a complete application package for the Section 1600 SAA, for YCWA to submit to CDFW. RBI also will compile necessary information and prepare a briefing package to support the consultation with CDFW on the potential project-related effects to CESA-listed species and species subject to protection under the federal Migratory Bird Treaty Act. RBI will coordinate with CDFW to make a final determination, but for the purposes of this scope it is assumed that the project activities could result in direct take of CESA-listed species; therefore, authorization by CDFW for incidental take, and the coordination that would be necessary for such authorization, will be required.

Deliverables

- Section 1600 SAA Application
- CESA Briefing Package

Subtask 4.5: Central Valley Regional Water Board CWA Section 401 Water Quality Certification. RBI will compile the necessary information and prepare a complete application package for the CWA Section 401 water quality certification application, for YCWA to submit to the Central Valley Regional Water Board. The Section 401 certification is required for the Section

404 permit compliance. RBI assumes that limited coordination activities with the Central Valley Water Board will be needed after the application submittal.

Deliverables

- Section 401 Water Quality Certification Application

Subtask 4.6: NPDES General Permit for Construction Activities. The RBI/Ascent Team will compile the information and prepare the materials necessary to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities. On behalf of YCWA, RBI/Ascent will prepare the required Permit Registration Documents (PRDs) and Notice of Intent, Stormwater Pollution Prevention Plan (SWPPP), and other documents required by the General Permit. The permit materials will establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit. The SWPPP will comply with all Regional Board requirements, including complete project information (e.g., site description, construction schedule, potential pollutant sources, non-stormwater discharges); best management practices (BMPs) (e.g., erosion control measures, stormwater management measures, BMP implementation schedule); BMP inspection, maintenance, and rain event action plans; and construction site monitoring program.

Deliverables

- NPDES General Permit for Construction Activities Application

Subtask 4.7: Yuba County Grading Permit. The RBI/Ascent Team will compile the necessary information and prepare materials necessary to obtain a grading permit from Yuba County. The application shall include the completed application form; grading plans; profiles, cross-sections, and specifications; drainage report; and evidence of coverage under the NPDES General Construction Permit (see Subtask 4.6, above).

Deliverables

- Grading Permit Application

Subtask 4.8: Bureau of Land Management Coordination (no permit required). The RBI/Ascent Team will engage with appropriate staff of the BLM to convey project information, understand BLM issues and concerns, and coordinate with BLM through the environmental and permitting process. This scope of work assumes that no permit or other approval from BLM will be required to execute the project.

Deliverables

- None

Feasibility

Project Team: The Project Team members' extensive professional experiences in their respective fields will ensure that the project approach is both feasible and appropriate for the proposed work (see **Attachment 13, BioSketches**). Christenson Associates, Inc. (CAI), the overall project coordinator, is a water resources engineering consulting firm with over 25 years of experience serving developers and owners of water resources and hydropower assets. CAI specializes in project management, planning, development and operations support of water resources facilities. Ascent Environmental, Inc., and Robertson-Bryan, Inc., experts in compliance with environmental planning laws and regulations, will prepare the CEQA and NEPA documents; RBI will prepare the required permit applications. R2 Resource Consultants, Inc., is an environmental and engineering consulting firm that specializes in: fisheries

biology; aquatic, wetland, and riparian ecology; hydrology; water resources; and facilities engineering, including civil/structure design and construction services. Since 1992, R2's staff of scientists and engineers has prepared numerous designs related to management and restoration of aquatic ecosystems and support facilities. R2 will prepare the design documents necessary to permit and construct the SCDF Screen.

The Project Team has worked together on the SCDF Screen project since 2011, including: preparation of a feasibility document that formulated the three alternatives being assessed at an equal level of detail in the EIR (R2 2014a), an assessment document that evaluated and compared a wide range of alternatives that will be used extensively in the EIR and EIS (RBI 2015), an analysis of high-flow conditions that assisted in narrowing down the list of potential alternatives relative to potential damage from high flow conditions (R2 2014b), and the public draft EIR (in prep, Ascent and RBI). CAI has been extensively involved in all aspects of the project to date.

Three-year Completion: The Project Team has assiduously prepared a project schedule outlining both parallel and consecutive tasks. Scheduling for this project has been built into the respective firms' calendars to avoid over-commitments, and substantial outreach has been conducted by YCWA with stakeholders to anticipate and address any issues and concerns. The project team is on track to complete the CEQA documents by August 2017. The NEPA process is projected to be completed by spring 2018.

The environmental permitting process is scheduled to begin in summer 2017 and end in early 2018. Engineering design is scheduled to begin in spring 2017 and be completed by spring 2018, with pre-construction following in mid-2018. Construction is anticipated to be complete by March 2019.

As with any water resources construction project, delays and contingencies may occur. CEQA, NEPA, or permitting processes could take longer due to agency delays. Permitting processes may require design recalibration. And finally, weather and river conditions could delay pre-construction activities. Circumstances beyond the control of the Project Team could delay the schedule, but contingencies have been anticipated and overcome in the past by Team members. Despite these potentialities, every effort will be made to finalize development of a shovel-ready project by late spring or early summer of 2018.

Climate Change Considerations

Anticipated Effects: Climate trends and projections contained in State Wildlife Action Plan (CDFW 2015b) are similar to those indicated in the 2015 Yuba County Integrated Regional Water Management Plan – 2015 Update (YCRWWMG 2015). In general, the following climate effects are anticipated in the lower Yuba region that will affect anadromous fish:

- increased air temperatures of four to six degrees by 2050;
- reduced streamflows and water supply in the long term, due to decreased snowpack and precipitation;
- lower water quality, from the direct effects of rising temperatures and the indirect effects of eutrophication, increased algal growth, release of mercury methylation, increased sedimentation from increased winter runoff, and decreased vegetative cover due to fire;
- increased flooding with greater storm intensity and higher variability in precipitation;
- inability of water infrastructure designed for a historic flow regime to accommodate increased winter peak flows;
- increased wildfire potential and, in particular, catastrophic wildfires with consequences for forest function, ecosystem health, and social and economic costs;
- upslope movement of vegetative communities as temperatures rise;

- potential fragmentation or degradation of habitat for stream-dependent species and elevation-dependent species in particular (species restricted in their abilities to move or re-adapt); and
- greater colonization and numbers of both terrestrial and aquatic invasive species.

How the Project Addresses Anticipated Climate Effects: Anadromous fish are particularly sensitive to the projected climate effects of increased air temperatures (which are expected to raise water temperatures), reduced streamflows, higher peak flood events, reduced water quality, and greater colonization of terrestrial and aquatic invasive species. The proposed project will help reduce a human-caused stressor on wild salmonids through an upgrade or replacement of the current fish screen. This will likely aid in the resiliency and persistence of anadromous fish in the face of climate change.

How Future Conditions Might Affect Benefits Provided: Future climate conditions are expected to include increased flooding and storm intensity. Alternatives included in the environmental documents are specifically designed to withstand higher flood-flow events and will be examined in light of the potential for overtopping the fish screen during various flow levels. Extreme and presumably infrequent events due to increased winter runoff and greater storm intensity could, depending on the alternative chosen, adversely affect the benefits of the project by overtopping of a new fish screen structure and, in turn, entrain juvenile salmonids into the diversion and canal.

Schedule & Deliverables

Table A-2. Schedule and Deliverables			
Task No.	Task Title	Deliverables and Key Project Milestones	Estimated Completion Dates
1	<u>Project Management and Administration</u>	Quarterly Progress Reports	Within 30 days of each quarter following Grant Execution
		Quarterly Invoices	Within 30 days of each quarter following Grant Execution
		Executed Subcontracts	Within 30 days of Grant Execution
2	<u>Environmental Compliance: Completion of the CEQA Process</u>	Notice of Preparation	<i>Completed January 2016</i>
		Public Review Draft EIR/Public Meeting	<i>To be completed early 2017 prior to grant funding</i>
		Final EIR	June 2017
		Findings of Fact and Statement of Overriding Considerations	June 2017
		Mitigation Monitoring and Reporting Program	June 2017
		Notice of Determination	July 2017
	<u>Environmental Compliance: NEPA Compliance Document</u>	Notice of Intent/Scoping	June 2017
		Notice of Availability/Draft EIS	November 2017
		Final EIS	February 2018
		Record of Decision	March 2018
3	<u>Prepare Final Design</u>	Preliminary Design Information	June 2017
		30% Design	June 2017
		60% Design	September 2017
		90% Design	December 2017

Table A-2. Schedule and Deliverables			
Task No.	Task Title	Deliverables and Key Project Milestones	Estimated Completion Dates
		100% Design Ready	March 2018
		Released For Construction Package	March 2018
4	<u>Environmental Permitting</u>	Permit Applications	March 2018
		Jurisdictional Delineation and Reporting	March 2018
		Biological Assessment and CESA Briefing Package	March 2018

Community Support and Collaboration

Broad-based Support: Letters of support have been generated by the following entities” Senator Jim Nielsen (4th District), Assemblyman James Gallagher (3rd District), Brophy Water District, South Yuba Water District, Dry Creek Mutual Water Company, Wheatland Water District and the South Yuba River Citizens League (SYRCL) (see **Attachment 14, Support Letters**). With these letters both local State Senate and Assembly representatives and all of the affected agencies demonstrate support. Additionally, SYRCL is the primary environmental non-profit with interest in this project and area. The 20-year process aimed at addressing the fish screen appears to be nearing completion with the planning grant and CEQA processes, events that stakeholders welcome and support.

Community Engagement: Beginning in 2005 with the first fish screen first feasibility study prepared by Montgomery Watson Harza Americas, Inc. (MWH), an extensive effort was made to engage stakeholders in project planning, design, and outreach. Following that, biological opinions and environmental review processes have offered additional opportunities both to engage the public and for the public to provide feedback on the project planning and design. Most recently, public engagement has involved both a public scoping meeting on February 11, 2016, and the Notice of Preparation (NOP), for the Fish Screen EIR; public comments in response to the NOP; and incorporation of the scoping comments into considerations for the EIR analysis. NEPA processes will offer similar public outreach and involvement opportunities for shaping the fish screen planning and design.

Further, since 2009, YCWA has conducted informal, but substantial outreach to stakeholder groups such as the South Yuba Citizens Group and agencies to garner an understanding of issues or concerns associated with the project. In April 2015, YCWA convened a multi-agency meeting to introduce the findings of prior feasibility studies in an effort to gain feedback about them, and in hopes of narrowing down the elements of a preferred alternative for CEQA. Participating agencies determined they would give such feedback during the CEQA evaluation process.

Financial Support: YCWA will receive direct financial support for the CEQA evaluation of the South Canal Fish Screen from four Member Units: Brophy Water District, Dry Creek Mutual Water Company, Wheatland Water District, and South Yuba Water District. The precise financial contribution is currently being negotiated, however preliminary indications are that the share will be 50% of incurred costs. This substantial support is meaningful in that the cost of this fish screen project represents a financial hardship for these entities.

Data Management and Access

Data and documents produced during this planning grant period for the SCDF Screen will likely be in three categories: 1) environmental reviews (i.e., draft and final CEQA and NEPA documents and support studies), 2) required permits and supporting materials, and 3) final project design.

To make environmental review documents available to general users in a timely manner, YCWA will post draft and final CEQA and NEPA documents, including technical appendices, on its website. YCWA will also provide data to the State data-sharing site, California Environmental Data Exchange Network. If appropriate, scientific documentation produced for CEQA and NEPA processes may also be posted on CDFW's Miradi database to help achieve and monitor progress toward the goals and objectives for Sacramento hydrologic conservation unit 1802, as well as the Sacramento and San Joaquin Ecoregion for anadromous fish.

The project will also be registered on the EcoAtlas site (<http://ecoatlas.org/>) with the appropriate project and restoration data referenced under EcoAtlas's "Project Tracker" online tool.

Permitting documents and supporting materials will be available at the respective permitting agency offices. Final project design will be posted at the YCWA website when complete.

YCWA will be responsible for ensuring that relevant documents are uploaded to the appropriate website, as covered under Task 4 in the project approach.

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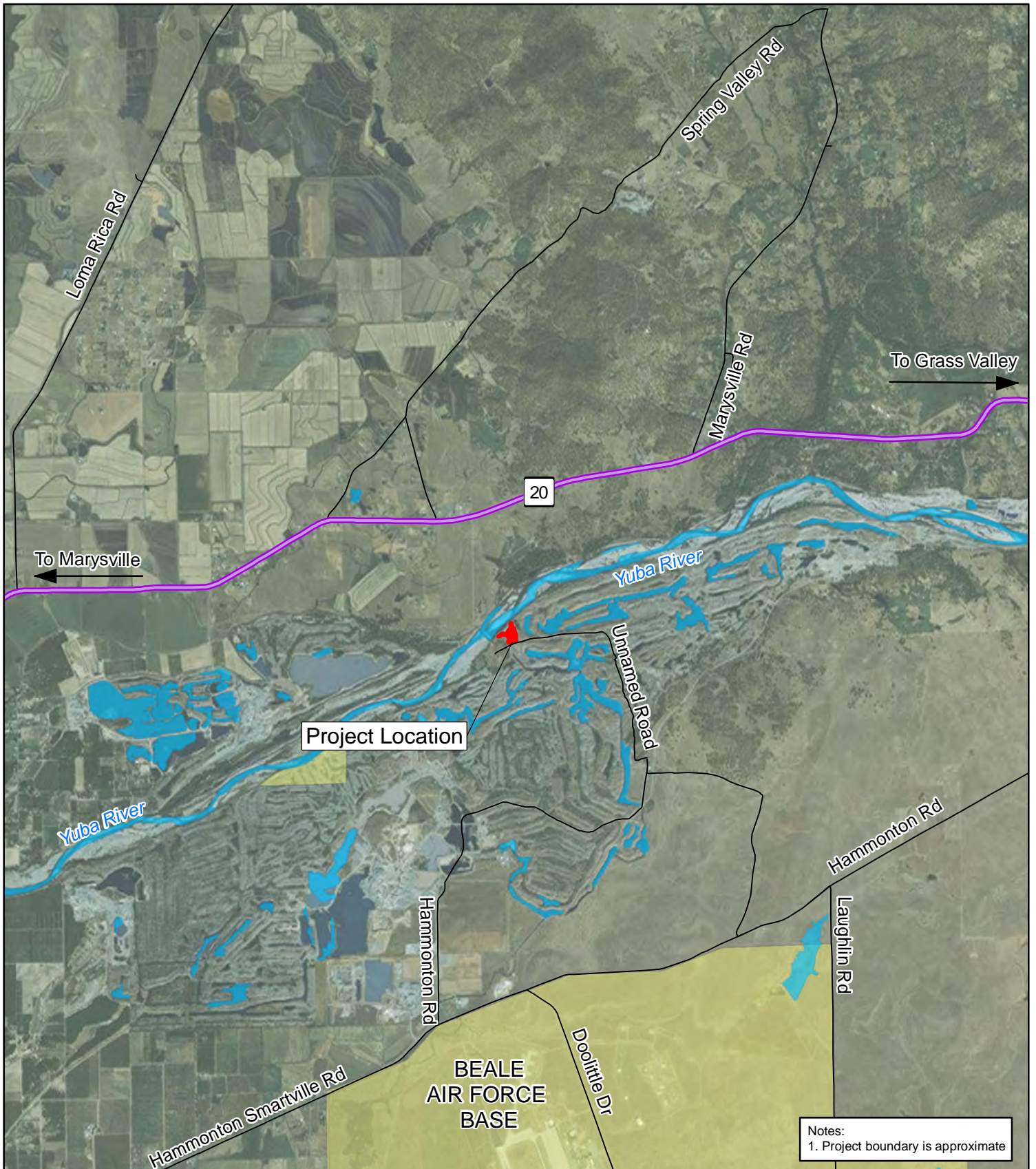
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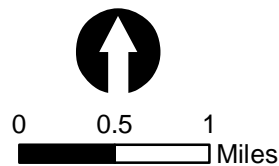
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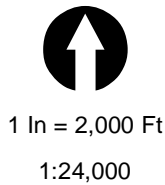
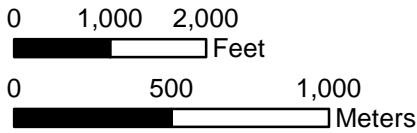
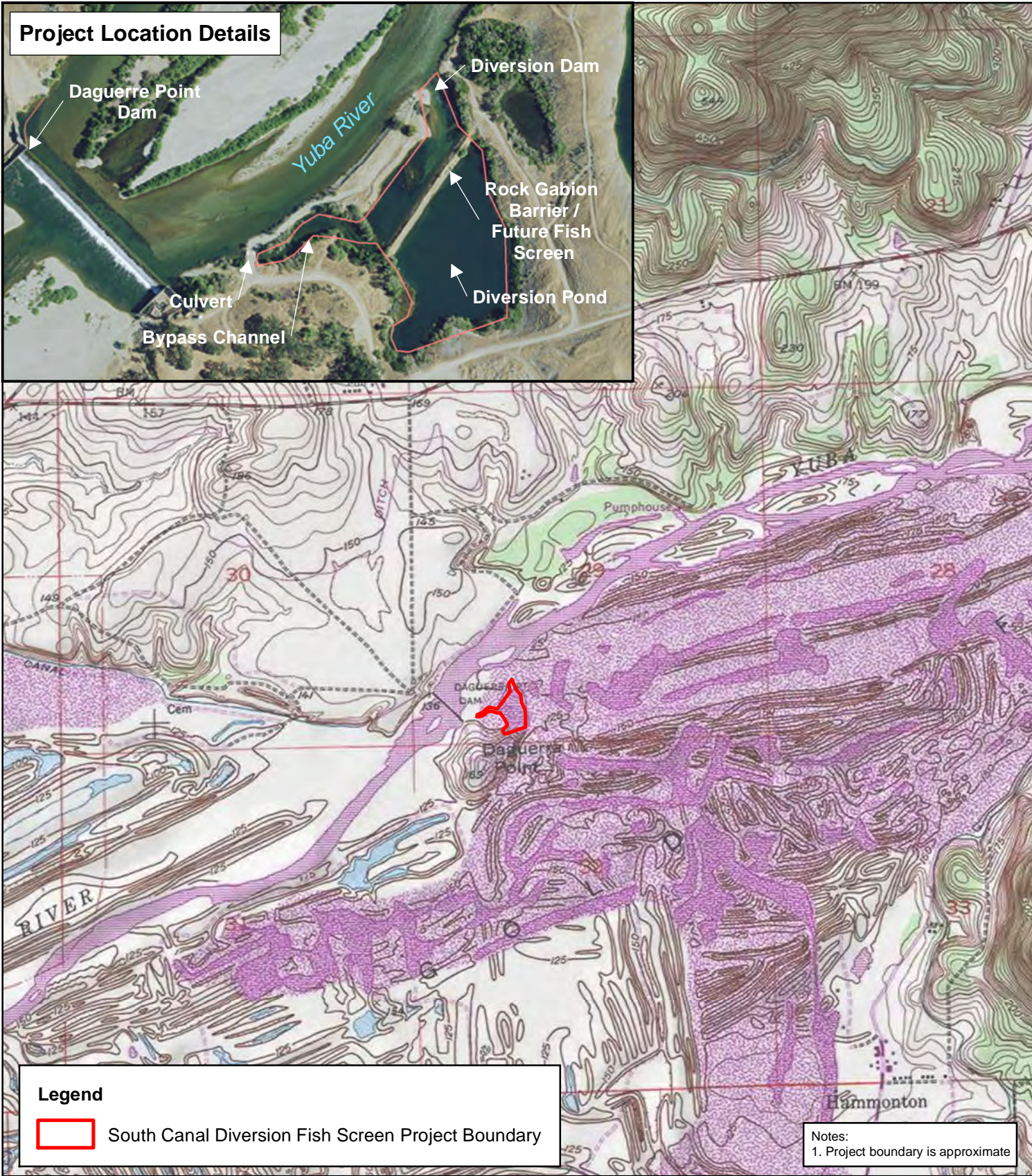
- South Canal Diversion Fish Screen Location
- Water Body
- Military Land



USGS 7.5' Quad: BROWNS VALLEY (1973)
 Legal Description: T16N, R5E, Sec. 31

Figure 1.
Project Location Map
Yuba County Water Agency
South Canal Diversion Fish Screen

Yuba County, CA



USGS 7.5' Quad: BROWNS VALLEY (1973)
 Legal Description: T16N, R5E, Sec. 31

Figure 2.
Project Specific Map
Yuba County Water Agency
South Canal Diversion Fish Screen

Yuba County, CA