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NATURAL RESOURCES AGENCY
DEPARTMENT OF FISH AND WILDLIFE
WILDLIFE CONSERVATION BOARD
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Final Meeting Agenda

WILDLIFE CONSERVATION BOARD

Stream Flow Enhancement Program
April 22, 2021, 10:00 a.m.

The public and Board members will participate in the meeting via Zoom. Public comment will be accepted per the agenda.

A recording will be posted after the meeting.

Please click the link below to join the webinar:

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If you can only join via telephone, email Mary.Ahern@wildlife.ca.gov for a phone number or call WCB at 916-445-8448.

*If you anticipate commenting during the Public Comment period or on a particular agenda item and would like to register your name ahead of time, please complete this [Speaker Card \(Word\)](#) and email to Mary.Ahern@wildlife.ca.gov prior to the day of the meeting.

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Adjourn

Attachment A – Definitions and Acronyms

Attachment B – WCB Strategic Plan Goals and Objectives

PERSONS WITH DISABILITES

Persons with disabilities needing reasonable accommodation to participate in public meetings or other CDFW activities are invited to contact the Department’s EEO Officer at (916) 653-9089 or EEO@wildlife.ca.gov. Accommodation requests for facility and/or meeting accessibility and Requests for American Sign Language Interpreters should be submitted at least two weeks prior to the event. Requests for Real-Time Captioners should be submitted at least four weeks prior to the event. These timeframes are to help ensure that the requested accommodation is met. If a request for an accommodation has been submitted but is no longer needed, please contact the EEO Officer immediately.

1. Roll Call

Wildlife Conservation Board Members

Charlton H. Bonham, Chair
Director, Department of Fish and Wildlife
Alina Bokde, Vice Chair, Public Member
Keely Bosler, Member
Director, Department of Finance
Diane Colborn, Public Member
Mary Creasman, Public Member
Fran Pavley, Public Member
Peter S. Silva, Member
President Fish and Game Commission

Joint Legislative Advisory Committee

Senator Andreas Borgeas
Senator Nancy Skinner
Senator Henry Stern
Assemblymember Laura Friedman
Assemblymember Al Muratsuchi – Alternate
Assemblymember Eduardo Garcia
Assemblymember Miguel Santiago – Alternate
Assemblymember *Vacant*
Assemblymember Marc Levine – Alternate

Executive Director

John P. Donnelly

2. Public Forum for Items not on this Agenda

3. California Stream Flow Enhancement Program (SFEP) FY 2020/2021 Informational Item

The future of California's water supply faces many uncertainties. To address these uncertainties, the California Water Action Plan (CWAP) was developed as a framework for sustainable water management, to enhance the resilience of the water resource system, and to restore important species and habitat. The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) authorized the Legislature to appropriate funds to address these challenges. The Wildlife Conservation Board (WCB) was allocated \$200 million for projects that enhance stream flow. Enhanced stream flow is defined as a change in the amount, timing, and/or quality of the water flowing down a stream, or portion of a stream, to benefit fish and wildlife.

A total of \$50 million, including \$3 million designated for scientific studies, was available for expenditure in Fiscal Year (FY) 2020/21 for the SFEP through a competitive grant process, in coordination with the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB) and other partners. Guided by the CWAP, funding is focused on projects that enhance flows in streams that support anadromous fish; special status, threatened, endangered or at-risk species; or provide resilience to climate change.

WCB released the 2020 SFEP Proposal Solicitation Notice (PSN) on July 9, 2020. In light of circumstances surrounding the wildfires that were burning throughout much of the State, the proposal submission deadline was extended from September 10, 2020 to October 1, 2020. The PSN closed on October 1, 2020, with a total of 70 proposals received, and \$101,684,377 in requested funds. The distribution of proposals across project categories is identified in Item 4.

Proposals were reviewed through a multi-tiered process. First, submissions were required to pass an administrative review, where applications were evaluated on adherence to SFEP's guidelines and completeness. Proposals that passed the administrative phase were then scored by a minimum of three reviewers, consisting of a CDFW regional specialist, SFEP staff, and other technical experts. Scores were based on the scoring criteria and standards delineated in the PSN. All proposals were presented to a Selection Panel for further assessment and discussion. The Selection Panel was made up of managers and staff from CDFW, WCB, and SWRCB. The Selection Panel met on January 27, 2021, January 28, 2021, and February 2, 2021 and developed a recommended list of projects based on numerous factors, including scoring, feasibility, durability, and how projects supported the specific goals of the SFEP PSN. Projects recommended for funding by the Selection Panel were reviewed by the WCB Executive Director, in preparation for the April 22, 2021 Board meeting.

4. Fund Allocation of Recommended SFEP Projects FY 2020/2021

Project Category	Proposals Received	Funds Requested	Projects Recommended for Funding	Proposed Allocation for Recommended Projects
Scientific Study	9	\$4,062,522	4	\$1,405,529
Planning	34	\$27,673,068	15	\$9,414,596
Implementation	23	\$55,941,515	10	\$23,565,402
Acquisition ¹	4	\$14,007,272	2	\$5,403,000
Totals²	70	\$101,684,377	31	\$39,788,527

¹ Appraisals for acquisition projects will be reviewed and approved by the Department of General Services.

² \$50 million, including \$3 million designated for scientific studies, was available for expenditure in FY 2020/21.

Consent Items

Items 5-22 are part of the Consent Calendar

5. Little Shasta River Flow Enhancement Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$589,586 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Little Shasta River Flow Enhancement Planning
Project Type:	Planning
Applicant/Grantee:	California Trout
Amount Recommended:	\$589,586
Funding Partners:	California Department of Fish and Wildlife and California Trout
Landowner(s):	Private
County:	Siskiyou
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Little Shasta River Flow Enhancement Planning project (Project) will be implemented on private lands along the Little Shasta River. The Little Shasta River, a tributary to the Shasta River, is located within the Klamath Basin near the city of Montague in Siskiyou County.

PROJECT DESCRIPTION

The Shasta River was historically one of the most productive salmon streams in California. Groundwater from cold, nutrient-rich springs provided nearly ideal aquatic habitat conditions that supported large Chinook and coho salmon populations. More than a century of aquatic and riparian habitat degradation along the Shasta River and its tributaries, including the Little Shasta River, has resulted in dramatic declines in wild salmon populations, particularly the federally threatened coho salmon. The development of surface and groundwater sources in support of irrigated agricultural activities throughout the Shasta Basin, including the Little Shasta River, led to reductions in the quantity and quality of cold-water habitats for rearing coho salmon. Historic adjudication of water rights did not consider the water needs of native fish species and as a result, surface water supplies are managed to prioritize agricultural and other water use.

The Little Shasta River has three distinct channel reaches with different topography and hydrology: the steep Headwater Reach (River Kilometer [RK] 39-30), the moderate-gradient Foothills Reach (RK 30-20), and the Bottomlands Reach (RK 20-0) that flows across the low-gradient Little Shasta River Valley. The Little Shasta River is over-appropriated for agricultural use. Historical data indicates that summertime stream flows at RK 26 are often less than the cumulative water rights of the first priority water right holders in the Little Shasta

River Valley. During the recent drought, this led to “zero-flow” conditions throughout most of the lower Bottomlands Reach from mid-June through mid-November of 2015. These conditions contribute to passage limitations for adult and juvenile salmonids, reductions in structurally complex aquatic habitat, and degraded water temperature conditions during juvenile coho over-summering.

The absence of stream flow in the Bottomlands Reach of the Little Shasta River causes organic nutrients to concentrate, and then mobilize in high concentrations during the early winter flushing flow events. While elevated concentrations of organic nutrients, specifically dissolved organic carbon, are expected during early season flushing flow events in lowland stream reaches, concentrations observed in the lower Little Shasta River are exceptionally high, exceeding those in the mainstem Shasta River and in comparable watersheds. High concentrations of organic nutrients can impair water quality, creating a barrier to upstream migration, particularly early in the fall for Chinook salmon.

Given the over-appropriation of water rights in the Little Shasta River, and the severity of seasonal zero-flow conditions, and subsequent water quality issues throughout the Bottomlands Reach, this Project takes a strategic approach to addressing these limiting factors.

Altered Hydrologic Function – Lack of Flows: The Project will utilize multiple alternatives analyses to identify and develop opportunities to increase flows in the Little Shasta River. One of these analyses will be focused on the replacement of the Musgrave and Linton Diversion, a second will assess the feasibility of returning a high priority spring water, Evan’s Spring, to the Little Shasta River, and another priority or two will focus on increasing on-farm irrigation efficiencies of participating Little Shasta River landowners. The goal of the alternatives analyses is to identify, select, and develop a preferred alternative to 30% design for each. Since flow contributions can significantly improve conditions for salmonids, implementation of the projects developed as a result of this planning effort will help to reduce flow as a limiting factor in the Little Shasta River.

Migration Barriers: The Project will develop a plan to 30% design to completely eliminate the fish passage barrier at the Musgrave and Linton Diversion, the last physical fish passage barrier on the Little Shasta River. Future implementation of the preferred plan will improve access to critical habitat for adults and improve out-migration flows for juvenile coho salmon.

Water Quality: The Project will focus on understanding the relationship between water quality, flow, and ecological health within the Bottomlands Reach of the Little Shasta River to support planning for water quality improvements. A range of priority actions (e.g., channel and riparian restoration, return flow management, water transfers for channel flushing to prevent nutrient accumulation) will be identified, which upon implementation, will reduce or eliminate this limiting factor.

This Project will incorporate extensive outreach to landowners along the Little Shasta River for each of the components described above. This outreach will build relationships and create the buy-in necessary to implement any on-farm or restoration projects that will be identified by this effort to enhance the amount and quality of instream flows throughout the Little Shasta River.

PROJECT FUNDING

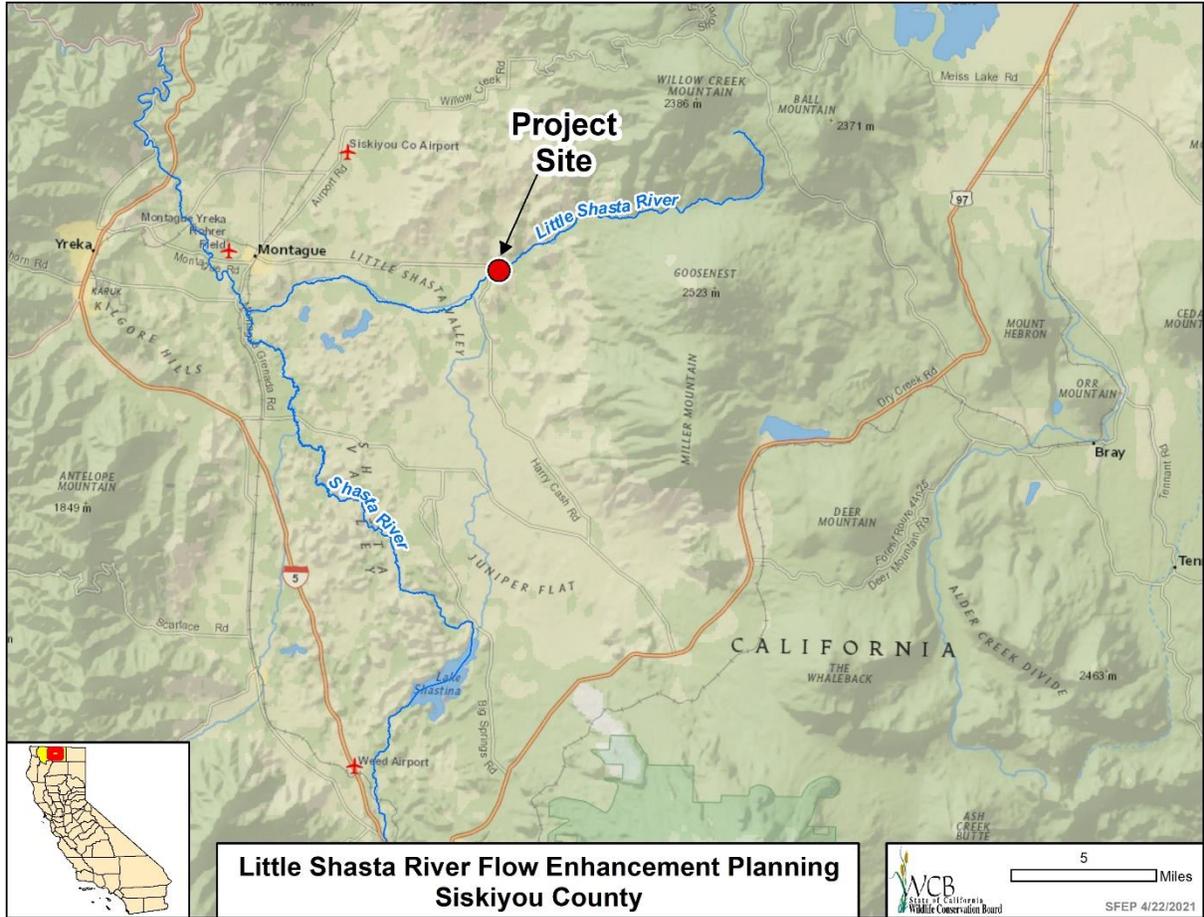
Partners	Amount
WCB	\$589,586
Other	\$286,309
Total	\$875,895

Project costs will be for project management, diversion alternatives analysis and design, on-ranch efficiency project designs, flow monitoring, and water quality investigation.

Other secured funding sources include CDFW and California Trout.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from the California Environmental Quality Act (CEQA) pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate Notice of Exemption (NOE) will be filed with the State Clearinghouse.



6. Farmers Ditch Water Use Efficiency and Flow Enhancement Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$319,295 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Farmers Ditch Water Use Efficiency and Flow Enhancement Planning
Project Type:	Planning
Applicant/Grantee:	California Trout
Amount Recommended:	\$319,295
Funding Partners:	California Trout
Landowner(s):	Private
County:	Siskiyou
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

Farmers Ditch Water Use Efficiency and Flow Enhancement Planning project (Project) is located on private lands adjacent to the Scott River, in Siskiyou County. The point of diversion for Farmers Ditch is located approximately 2.5 miles north of Callahan, and the earthen ditch serves approximately 1,238 acres along the east side of the Scott River Valley. The Scott River is a tributary of the Klamath River.

PROJECT DESCRIPTION

The Scott River watershed supports several anadromous fish species including coho salmon, Chinook salmon, and steelhead trout. Coho salmon of this region belong to the Southern Oregon/Northern California Coast (SONCC) evolutionarily significant unit, which is listed as threatened under both the Federal Endangered Species Act and the California Endangered Species Act. Seasonally low stream flows through the upper reach of the mainstem Scott River prevent access to vital headwater tributaries. According to the SONCC Coho Salmon Recovery Plan, limiting stresses for the Scott River coho salmon population are the degraded riparian habitat conditions and altered hydrologic function that are occurring throughout the basin.

The Farmers Ditch Company's combined water rights are exercised on an annual basis and are the second largest point of diversion identified in the Scott River Decree. Water is delivered through a gravity flow, earthen ditch system that is approximately 12.5 miles in length. The primary crop type under the decreed acreage consists of pastureland for livestock grazing, and various types of hay production. The point of diversion is located within an area known as the Scott River tailings reach. In the mid-nineteenth century, Yuba dredges were used to extract gold and other metals from below the riverbed in this area. These

unmitigated mining operations severely degraded over 4.25 miles of the mainstem Scott River, contributing to seasonal flow disconnections, fish-passage barriers, reduced riparian form and function, and other impacts. In 2015, the Farmers Ditch diversion system was heavily damaged during a 25-year, high-water event. This high-water event not only created significant water delivery complications for the Farmers Ditch Company, but it also greatly impacted fish access to Sugar Creek, which is a key tributary for anadromous fish.

The Project will carry out an initial suite of planning activities to evaluate conveyance system efficiencies and on-farm water use and efficiencies; identify options for conveyance system improvements, on-farm efficiency improvement measures, and alternative locations for the point of diversion; and review relevant water rights and instream dedication opportunities to support future implementation of actions that improve water management and enhance stream flows.

Conveyance System Assessment and Efficiency Evaluation – Strategic ditch reaches will be identified to assess the conveyance efficiency over the course of an irrigation season. A characterization of conveyance efficiency will be prepared for each reach that identifies contributing attributes, primary deficiencies, and condition relative to other reaches. Ditch efficiency assessments for the monitored reaches will be extrapolated to unmonitored reaches. The results of the assessment, rankings, and recommendations will be summarized.

On-Farm Water Use Efficiency Appraisal – A focused appraisal of on-farm water use and efficiencies will be conducted on select ranches. Water delivery information collected in the Conveyance Assessment will be used to conduct a ‘water balance’ for each of the selected ranches whereby primary inflows – presumably surface diversions and groundwater pumping – are reconciled with crop consumptive use and estimates of seepage, tailwater and system spillage. Because inflows must match outflows, on-farm deep percolation can be estimated as the remaining difference. Estimating the absolute and relative magnitudes of these flow paths establishes a water use baseline that is essential to identifying potential opportunities for conservation. A range of water volume potentially conserved through infrastructure or management improvements will be provided.

Point of Diversion and Efficiency Alternatives Analysis – A menu of conveyance system modifications, on-farm efficiency improvement measures, and alternative point of diversion locations will be developed. The evaluation will be directly informed by the results of the Conveyance System Assessment and the On-Farm Water Use Appraisal. In addition, this task includes assessing existing conditions and collecting data needed to evaluate alternative point of diversion locations, feasibility, stream flow benefits, and potential costs to obtain easements for construction, operations, and maintenance of infrastructure. Potential alternatives will be formulated, evaluated, reviewed with stakeholders, and summarized.

Water Rights Analysis and Instream Dedication Opportunities Assessment – Relevant water rights will be described to guide development of potential water

conservation and management modifications. Farmers Ditch Company members will be engaged to identify willing participants interested in pursuing water dedications pursuant to CWC Section 1707. California Trout will assist interested water users with the CWC Section 1707 process and provide a legal review of existing water rights, potential instream dedications, and recommended water rights changes. As needed, Project partners will collect necessary technical information required to submit CWC Section 1707 petitions, coordinate preliminary discussions with SWRCB and Scott Valley and Shasta Valley Watermaster, conduct outreach to agencies and other stakeholders affected by proposed water rights changes, and coordinate and secure consumptive use analysis for participants agreeing to dedicate water.

PROJECT FUNDING

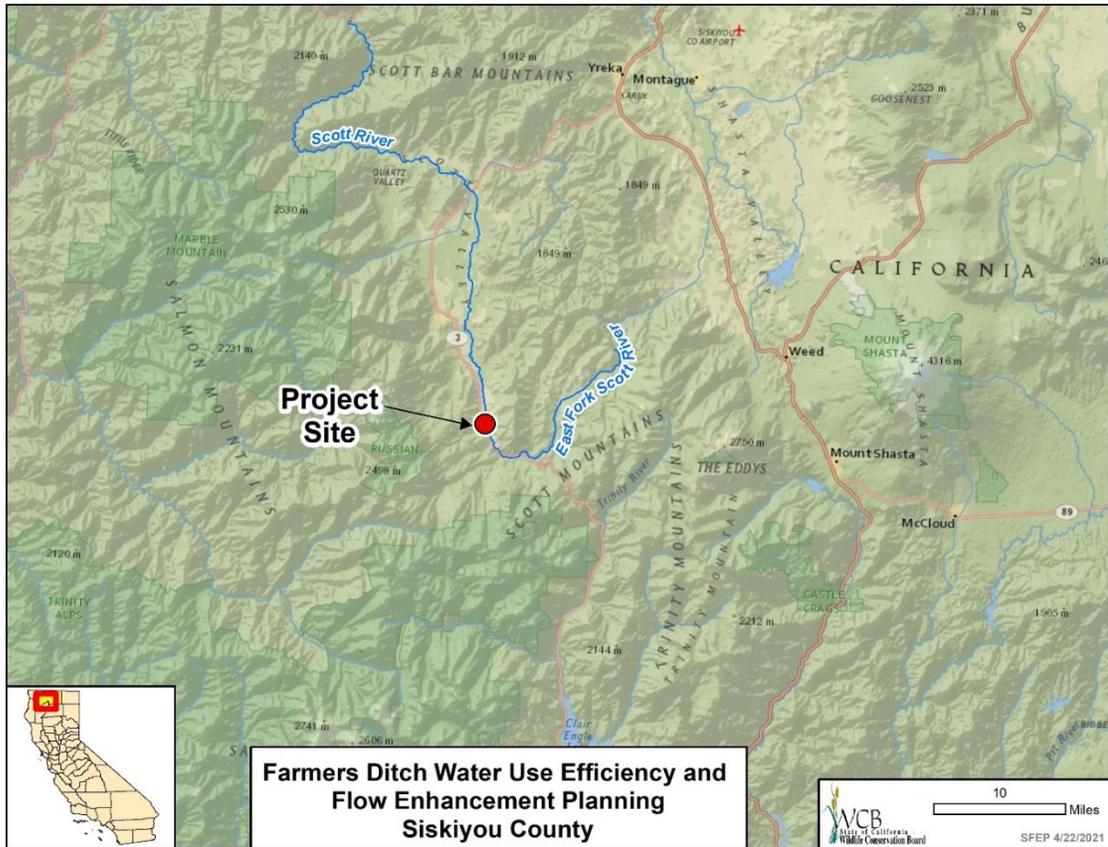
Partners	Amount
WCB	\$319,295
Other	\$36,719
Total	\$356,014

Project costs will be for project management, conveyance system assessment and efficiency evaluation, on-farm water use efficiency evaluation, point of diversion and efficiency alternatives analysis, and water rights analysis and instream dedication assessment.

Other secured funding sources include California Trout.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



7. Scott River Flow Enhancement and Fish Passage Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$234,180 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Scott River Flow Enhancement and Fish Passage Planning
Project Type:	Planning
Applicant/Grantee:	Siskiyou Land Trust
Amount Recommended:	\$234,180
Funding Partners:	U.S. Fish and Wildlife Service and Landowner
Landowner(s):	Private
County:	Siskiyou
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Scott River Flow Enhancement and Fish Passage Planning project (Project) will occur on the Scott River Ranch (Property), located approximately 2 miles east of Etna, in Siskiyou County. The Property encompasses approximately 2 miles of the mainstem Scott River and about 3,673 acres of contiguous agricultural production ground and rangeland. In 2010, WCB contributed \$1,952,700 to Siskiyou Land Trust for purchase of a conservation easement over the subject Property.

PROJECT DESCRIPTION

The Scott River is a major tributary to the Klamath River. Significant lengths of the Scott River and its tributaries have been disturbed by historical land use and resource management practices, including logging and mining operations, large-scale beaver trapping and removal, development of extensive water diversion systems, conversion of much of the valley floor to agricultural operations, and flood prevention measures including the straightening and leveeing of significant stretches of the mainstem.

The Scott River watershed supports several anadromous fish species including coho salmon, Chinook salmon, and steelhead trout. Coho salmon of this region belong to the SONCC evolutionarily significant unit, which is listed as threatened under both the Federal Endangered Species Act and the California Endangered Species Act. The SONCC Coho Salmon Recovery Plan states that numerous water diversions, associated small diversion dams and interconnected groundwater extraction for agricultural purposes, and the diking of the mainstem Scott River have reduced summer and winter rearing habitat in the Scott River basin, limiting juvenile success. Valley-wide agricultural water diversions,

groundwater pumping, and drought have all combined to cause premature surface flow disconnection along the mainstem Scott River.

The Property encompasses the Young's Point diversion structure, which diverts water to a multi-user irrigation system shared by Scott River Ranch and the Scott Valley Irrigation District (SVID). This represents the largest point of diversion within the Scott River watershed. The diversion structure is a channel spanning, splashboard dam that includes a 16-step fish-ladder for upstream and downstream adult and juvenile fish passage. The ladder proves mostly effective for adult passage in the winter and spring months; however, juvenile passage is largely restricted to downstream movement, as surface diversion and natural conditions prevent passage for all life stages in the summer and early fall.

The overall goals of the Project are to support future actions that enhance instream flow conditions, fish-passage, and on-farm water management through the following actions:

Stream Flow Enhancement Analysis: Apply additional effectiveness monitoring techniques, including water level/discharge measurements, wetted-perimeter analysis, alluvial connectivity surveillance, and fisheries monitoring, to a seasonal water transaction between Scott River Ranch and Scott River Water Trust. The outcomes will inform future flow dedications and fish passage improvements over the Young's Point diversion structure.

Young's Point Fish Passage Assessment: Evaluate fish passage at Young's Point diversion structure through a structural and biological analysis of the diversion system. This activity is fully funded with matching funds provided by the U.S. Fish and Wildlife Service (USFWS). The findings will be integrated with results from other project-related analyses to develop structural and flow related management recommendations for infrastructure modifications.

Agricultural Practices and Efficiency Analysis: Identify opportunities to improve efficiency and reduce water use based on land management and stewardship practices. The emphasis will be on actions that provide a direct and measurable stream flow enhancement, with additional review of potential indirect benefits to stream flow related to managing uplands as wet meadows in winter and spring months.

Water Right Perfection, Valuation, and 1707 Petition Preparation: Conduct necessary due diligence to ensure Scott River Ranch adjudicated water rights are perfected and prepare a preliminary water right valuation opinion for Scott River Ranch's 5th Priority 7.65 cubic feet per second water right (Big Ditch water right at SVID/Young's dam diversion). The opinion is meant to provide a range of values to inform consideration of alternative approaches to instream dedications and support development of a formal water right appraisal in association with a later project phase. In addition, Project partners will prepare a CWC Section 1707 petition to

add instream uses to the list of allowable uses for all Scott River Ranch water rights and documentation necessary to amend the Scott River Decree.

Long-term Water Dedication Development: Assess long-term or permanent instream flow dedication options in combination with ranch land management actions to identify approaches that best support fisheries and ecological needs while also maintaining ranch viability.

An alternatives report will be prepared to integrate the results from the various analyses and provide recommendations for increased flow past the Young's Point diversion structure.

PROJECT FUNDING

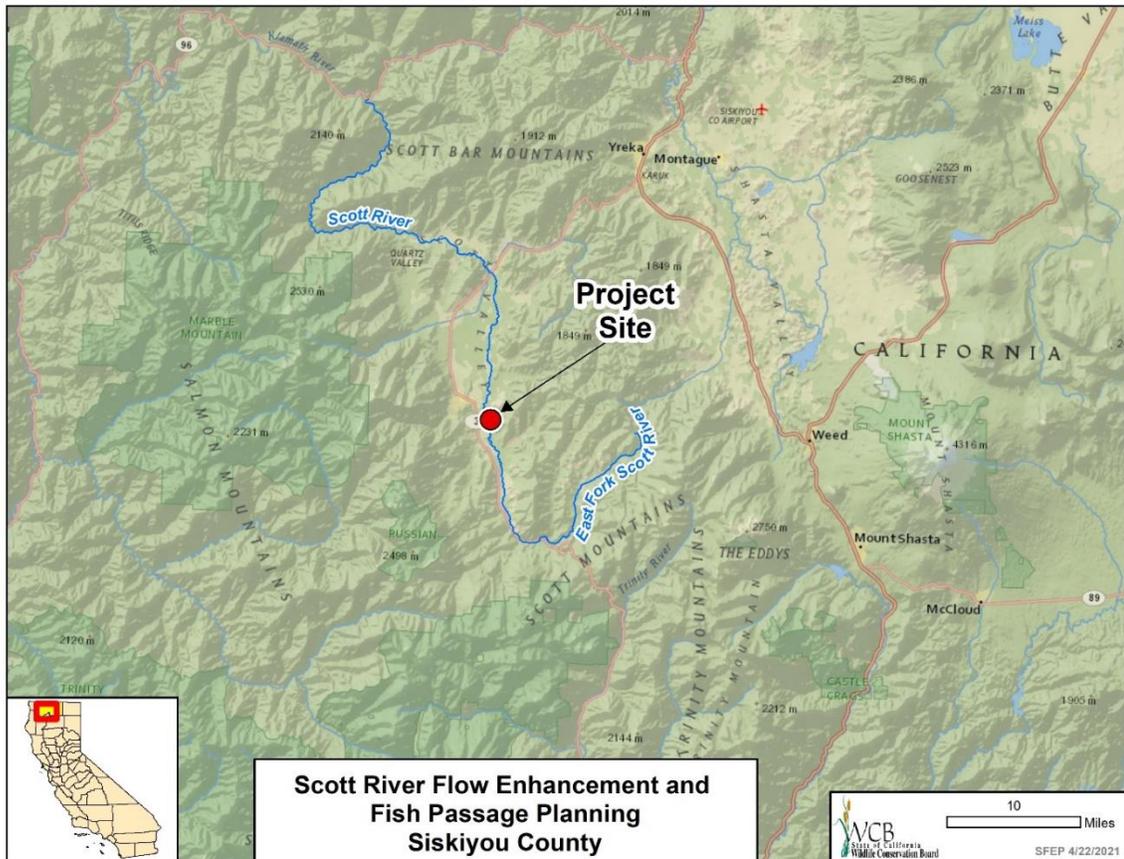
Partners	Amount
WCB	\$234,180
Other	\$133,000
Total	\$367,180

Project costs will be for project management, stream flow enhancement analysis, integration of findings from the Young's Point fish passage assessment (funded through cost share) into management recommendations, agricultural practices and efficiency alternatives, water right due diligence and preliminary valuation, preparation of a CWC Section 1707 Petition for instream dedication, and evaluation of long-term instream dedication options.

Other secured funding sources include USFWS and Landowner.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



8. Williams Creek Restoration Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$250,318 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Williams Creek Restoration Planning
Project Type:	Planning
Applicant/Grantee:	Humboldt County Resource Conservation District
Amount Recommended:	\$250,318
Funding Partners:	California Coastal Conservancy
Landowner(s):	Private
County:	Humboldt
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Williams Creek Restoration Planning project (Project) will occur on eight private parcels adjacent to Williams Creek one mile east of Ferndale in Humboldt County. Williams Creek is a perennial coastal tributary in the Salt River watershed, located in the lower Eel River Delta system in Northern California. From its upper watershed in the Wildcat Mountains, Williams Creek enters the delta area and is bounded by small residences to the west and by organic dairy farms to the east and connects to the Salt River 1.8 miles downstream. In 2016, WCB SFEP contributed \$2,629,826 to the Humboldt County Resource Conservation District (HCRCD) for an implementation project to reconnect two tributaries (Francis and Williams creeks) to the Salt River, enhance 2.5 miles of in-channel complexity, and restore about 47 acres of riparian and wetland habitats to enhance stream flow in the Salt River, located immediately below the Project area. Construction of the final segment of that project has been delayed due to the need to design and implement a sediment management strategy for the Williams Creek watershed prior to completing the connection between the Salt River and Williams Creek.

PROJECT DESCRIPTION

Williams Creek is hydrologically dysfunctional and annually floods residences, working agricultural lands, and City of Ferndale and County infrastructure. Extremely high sediment loads carried during flood events contribute to the reduction of the creek's channel capacity and exacerbates flood impacts. Currently, Williams Creek is completely disconnected from the Salt River channel and the rest of the larger watershed, with creek flow currently splaying across agricultural fields.

The Project is part of a larger watershed-level program: the Salt River Ecosystem Restoration Project (SRERP). While the SRERP will eventually connect Williams

Creek at its confluence with Salt River, recent studies on Williams Creek indicate that it is necessary to restore Williams Creek to manage its sediment loads prior to connecting to the Salt River. The restoration of Williams Creek will enable the completion of the SRERP, and reconnecting Williams Creek to the Salt River will reinstate Williams Creek flow back into the Salt River and reestablish fish passage from the Salt River to 6.9 miles of historic fish habitat in the Williams Creek watershed.

Specific planning targets include channel widening and deepening along the lower 1.8-mile reach of Williams Creek (between Grizzly Bluff Road and the confluence with the Salt River) to efficiently convey low and high flows via a main channel and associated floodplains, increasing channel capacity by approximately 45%, and decreasing flow velocities and providing benefits to migrating salmonids during typical winter and spring flows.

The rehabilitated channel corridor will include low points (non-structural spillways) to allow water to preferentially spill out of the channel at select locations to avoid flooding where homes and infrastructure are located, and these flood waters will be recaptured by directing flow through existing swales and newly constructed routes and re-enter Williams Creek further downstream or be directed to the Salt River.

The recapturing of flood waters will increase flow not only in Williams Creek but also in the larger Salt River watershed, providing critical post-storm sediment transport benefits. Design plans also address the management of sediment by proposing to capture coarser sediments that are unable to be transported by Salt River flows in a sediment management area (basin). Water quality will also increase with the installation of a diverse pallet of riparian species in the currently fragmented corridor.

The following actions will be accomplished to position the Project at an implementation ready stage:

- Continue robust stakeholder engagement with the community and regulatory and permitting agencies
- Advance Williams Creek design plans to 95%
- Develop permit applications
- Develop a monitoring and management plan

The eventual implementation of the Williams Creek Restoration Project and the connection to Salt River will alleviate annual flood impacts to area residents and agricultural operators, restore the hydrologic function within the watershed, increase stream flow, and return fish passage to the watershed.

PROJECT FUNDING

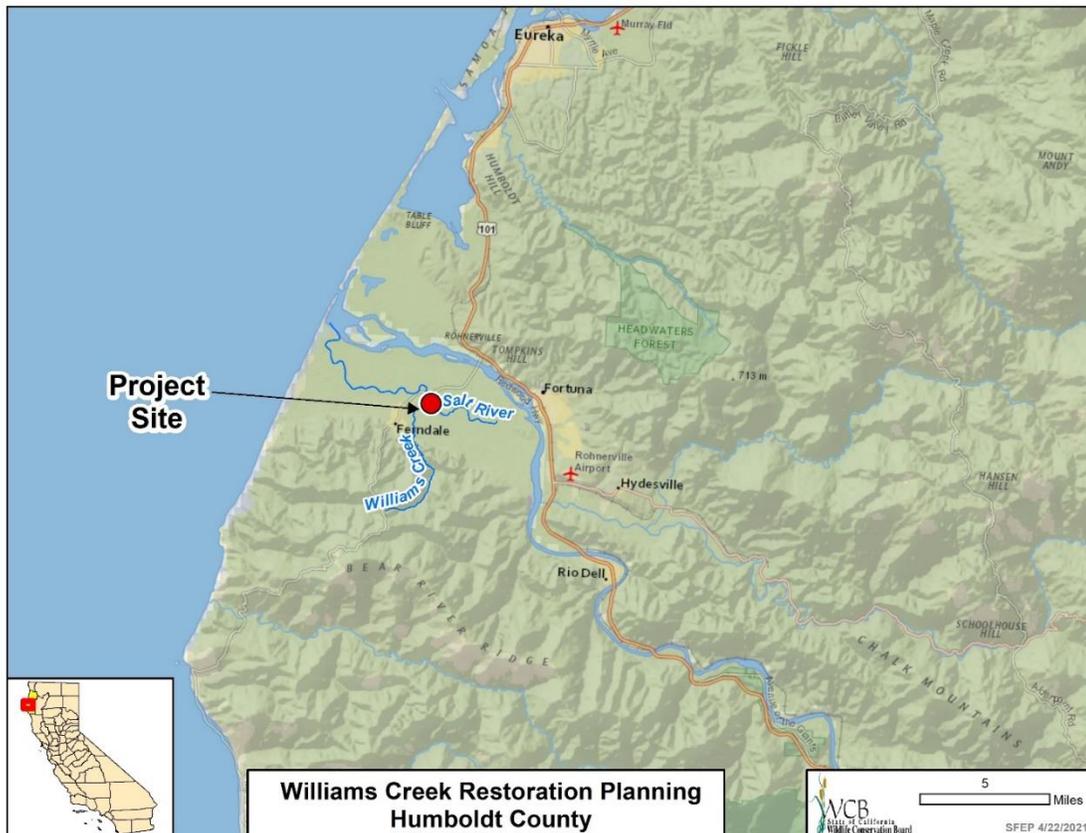
Partners	Amount
WCB	\$250,318
Other	\$40,000
Total	\$290,318

Project costs will be for continued stakeholder engagement with the community and regulatory and permitting agencies, advancement of Williams Creek design plans to 95%, developing permit applications, developing a monitoring and management plan, and completing other tasks to position the Project for restoration implementation.

Other secured funding sources include the California State Coastal Conservancy.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



9. Community Water Management Planning in Browns and Tule Creeks

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$278,596 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Community Water Management Planning in Browns and Tule Creeks
Project Type:	Planning
Applicant/Grantee:	The Watershed Research and Training Center
Amount Recommended:	\$278,596
Funding Partners:	National Fish and Wildlife Foundation, Bureau of Reclamation – Trinity River Restoration Program, and The Nature Conservancy
Landowner(s):	Private
County:	Trinity
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Community Water Management Planning in Browns and Tule Creeks project (Project) is located on private lands adjacent to Browns and Tule creeks, in the southern portion of the Klamath bioregion, in Trinity County. Browns Creek, a tributary to the Trinity River, is located seven miles southwest of Weaverville. Tule Creek, which flows to Hayfork Creek, a tributary to the South Fork Trinity River, is located three miles southwest of Hayfork.

PROJECT DESCRIPTION

The Project area has a Mediterranean climate with seasonal low flows. Historical land uses (e.g., logging, mining, ranching, agriculture), ongoing drought, and residential stream diversions and withdrawals have further reduced seasonal stream flows in areas providing key spawning and rearing habitat for endangered coho salmon, as well as Chinook salmon and steelhead trout. Climate models predict Northern California will become hotter and drier, putting greater pressure on the streams and organisms that rely on them. Northern California is presently suffering from a multiple year drought and record-breaking wildfires, thus there is an urgent need to protect and restore functional ecological flows in streams identified as priority for fish and wildlife, while also improving water resiliency for residents.

The Project will involve outreach to private landowners to help identify, design, and, in the future, implement projects that will directly improve instream flow and habitat conditions for anadromous fisheries in Browns and Tule creeks. Through this Project, ecological flow objectives will be developed using the California

Environmental Flow Framework and a voluntary Community Water Management (CWM) planning process will be implemented. The CWM framework, originally developed in the Navarro River Watershed with support from previous WCB SFEP grants (2016 and 2018) to Mendocino County Resource Conservation District, will be used to assist private landowners along Browns and Tule creeks in understanding the importance of water conservation and identifying and prioritizing opportunities to restore summer base flows, while also addressing water supply security for its residents. Examples of potential tools include improved water conservation measures to increase the overall efficiency of residential water use, use of storage ponds or tanks and forbearance of diversion of stream flows during the summer dry season, and coordination of diversions so that fewer users are pumping from the creek at the same time.

Following efforts to identify and prioritize projects to restore dry season flows, site specific plans will be developed to an intermediate (65%) level of design for 2 to 6 water conservation and stream flow enhancement projects, in order to position those projects for future implementation. The resulting projects are expected to improve summer rearing conditions for juvenile salmon and increase stream flows to encourage fish migration, while helping residents with water security.

In addition, efforts will be made to increase regional partnerships with other organizations by sharing resources, tools, and learned knowledge from others implementing similar instream flow improvement programs across the State. A key element will be sharing lessons learned and stories to inform other groups about collaborative, stakeholder-driven approaches to enhance stream flows via the California Environmental Water Network, presentations, and other formats.

PROJECT FUNDING

Partners	Amount
WCB	\$278,596
Other	\$81,666
Total	\$360,262

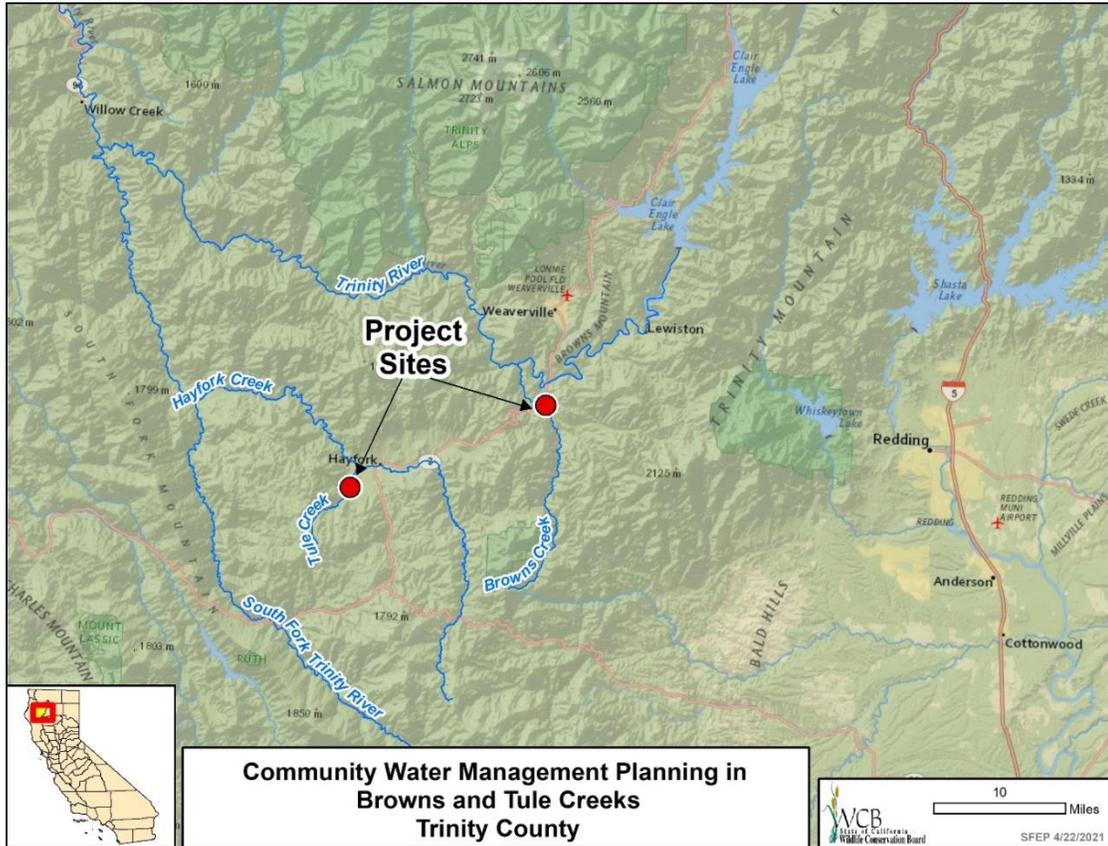
Project costs will be for project management, development of ecological flow criteria, development of Community Water Management Plans, building regional partnerships, monitoring, and development of project-specific designs.

Other secured funding sources include National Fish and Wildlife Foundation, Bureau of Reclamation – Trinity River Restoration Program, and The Nature Conservancy.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of

this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



10. Ecological Flow Assessment of Middle and North Fork Eel River Tributaries

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$441,273 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Ecological Flow Assessment of Middle and North Fork Eel River Tributaries
Project Type:	Scientific Study
Applicant/Grantee:	Round Valley Indian Tribes
Amount Recommended:	\$441,273
Landowner(s):	Round Valley Indian Tribes
County:	Mendocino
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Ecological Flow Assessment of Middle and North Fork Eel River Tributaries (Project) will occur within tribal lands (the Round Valley Indian Reservation) or fee parcels within the Reservation boundary that are controlled and managed by the Round Valley Indian Tribes. Project activities will occur within 11 streams in the watersheds of the Middle and North Fork Eel River, located near Covelo, in Mendocino County.

PROJECT DESCRIPTION

The Eel River basin is home to three listed anadromous fish species upon which the Tribes have depended: Chinook salmon, steelhead trout, and coho salmon, as well as Pacific lamprey, a California species of special concern. Populations of salmon and steelhead have declined precipitously over the last 100 years in the Eel River watershed, including the Middle and North Fork sub-basins. The tributaries to the Middle and North Fork Eel River once supported healthy runs of salmonids and Pacific lamprey that have cultural significance for the Round Valley Indian Tribes and provided subsistence. Over time, changes in land management, degradation of the broader Eel River fishery, introductions of non-native species, and changes in local and regional flow management have contributed to the decline of these species in tributaries on the Round Valley Indian Tribes' tribal lands and throughout the Eel River watershed.

During the summer low-flow period, consumptive water use can exceed the daily average flow in tributaries to the Eel River. While the lack of flow is currently the most pressing limiting factor, this scientific study may also determine if the recovery of the listed species is limited by other factors. Anticipated limiting factors include seasonal reduction or elimination of instream flows, decreases in rearing

and spawning habitat quantity and quality, decreases in benthic macroinvertebrate production, decreases in riparian health and cover, and increases in water temperatures.

The goal of the Project is to develop stream flow recommendations for tributaries to the Middle Fork and North Fork of the Eel River to be implemented in future project phases on the Round Valley Indian Tribes' tribal lands and help evaluate instream flow methods for broader application across California. These recommendations will be developed by conducting a stream assessment and diversion inventory, stream gaging and water temperature monitoring to develop unimpaired flow and stream temperature estimates, developing ecological flow recommendations using the California Environmental Flows Framework and percent-of-diversion methods, and evaluating the performance of those flow recommendations using the individual-based salmon model, inSALMO. Results from the modeling will be translated into flow recommendations designed to improve fish productivity on the tribal lands. Completion of this scientific study will support future implementation of instream flow enhancements through policy and regulations that can be put in place and enforced by the Tribal Council, under their existing sovereign authority. In addition, results will be disseminated through publication of a manuscript in an open access peer reviewed journal, presentations at relevant scientific conferences, and at least one webinar for Eel River stakeholders.

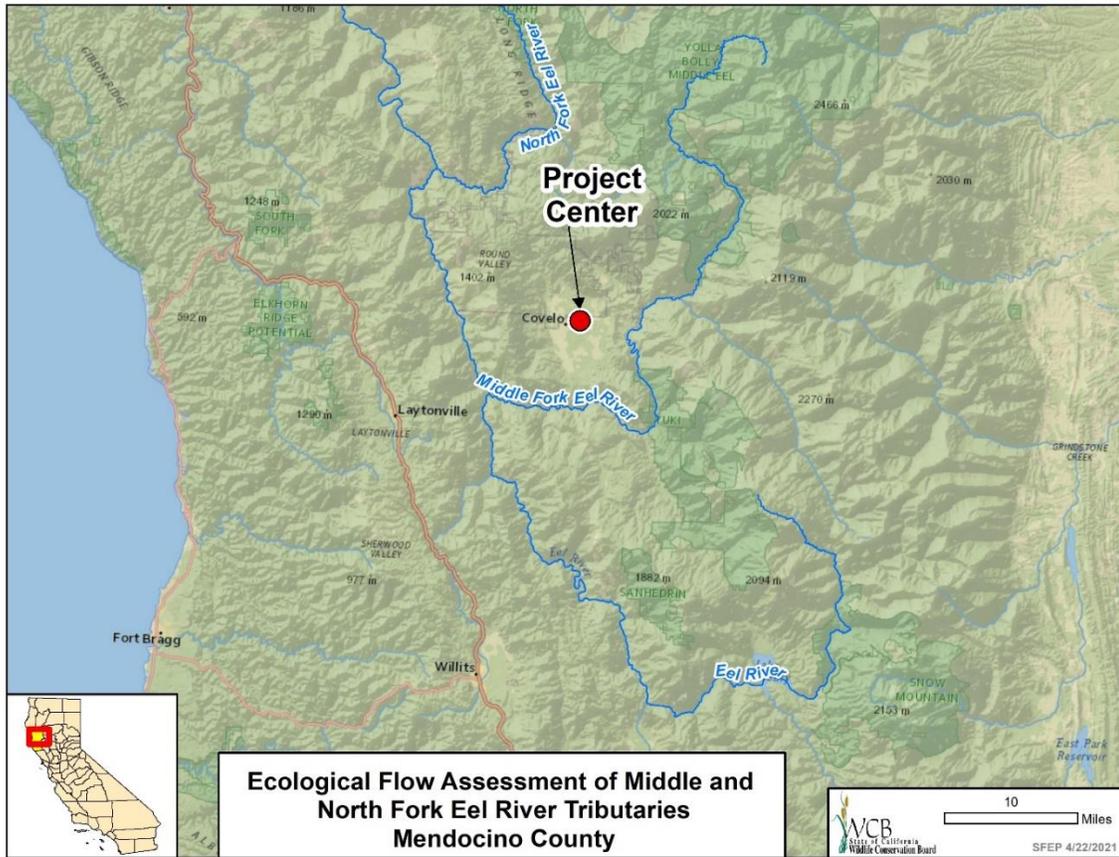
PROJECT FUNDING

Partners	Amount
WCB	\$441,273
Other	\$0
Total	\$441,273

Project costs will be for project management, stream and diversion inventory, stream gauging and water temperature monitoring, habitat mapping, hydraulic and biological modeling, development of flow recommendations, and synthesis and dissemination of findings.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15306, Class 6, Information Collection, as data collection, research, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



11. Deer Creek Irrigation District Diversion Automation

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$328,659 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Deer Creek Irrigation District Diversion Automation
Project Type:	Implementation
Applicant/Grantee:	Trout Unlimited
Amount Recommended:	\$328,659
Funding Partners:	Deer Creek Irrigation District, Trout Unlimited
Landowner(s):	Deer Creek Irrigation District
County:	Tehama
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Deer Creek Irrigation District (DCID) diversion is located 11 miles upstream of the Deer Creek confluence with the Sacramento River. The DCID service area covers approximately 2,250 acres, located 3.5 miles downstream of the diversion. Project benefits will occur in the 11 mile-long-reach of lower Deer Creek between the DCID diversion and the confluence with the Sacramento River.

PROJECT DESCRIPTION

Deer Creek flows for 75 miles from the snowfields of Mount Lassen to its confluence with the Sacramento River. The cool waters of the upper and middle reaches support Central Valley spring run Chinook salmon, Central Valley steelhead trout, fall run Chinook salmon, and numerous other native fish species. In the lower watershed, surface flow is supplied via irrigation ditches to agricultural water users from three points of diversion. The most upstream diversion is operated by DCID, which may legally divert 33% of available flow. The 12-mile system of canals and ditches date back to the 1920s, and many system components are near the end of their life expectancy, causing fluctuations in delivery flows and creating challenges for on-farm irrigation management. The distance from the diversion point to the deliveries, system losses, and on-farm inefficiencies, coupled with lack of system storage and the labor-intensive nature of controlling the diversion, cause difficulty matching diversions to delivery demands.

The Deer Creek Irrigation District Diversion Automation (Project) will automate the DCID diversion, allowing the DCID ditch operator to monitor flow rates in real-time and remotely adjust diversion and ditch flow rates to meet actual water demand and minimize operational spillage and tailwater losses. The time saved by not needing to travel to the diversion to make these adjustments is a significant step toward improving efficiency, and the new operational capability provided by the

Project will enhance stream flow in lower Deer Creek by up to 3 cfs during the March-October diversion season.

The Project will consist of the following components:

- New motor drive and programmable logic controller (PLC) on the DCID headgates
- New motor drive, flow measurement device, and PLC on the operable flow splitter (“wye”) that splits the flow between the north and south main ditches
- New flow monitoring devices and remote terminal units (RTU) at the upper and lower north main spill sites
- New expandable supervisory control and data acquisition (SCADA) system to integrate the new RTUs and PLCs with the existing DWR main canal monitoring flume and south main canal monitoring station

During the irrigation season, the operator will monitor the rate of diversion and the spillage throughout the day, and adjust diversion rates as needed to meet delivery demands and minimize operational spillage and tailwater losses in real time. This will directly result in DCID diverting less water from Deer Creek, with corresponding increases in stream flow. Benefits will be compounded by other ongoing efforts in the watershed, including planning and design for groundwater substitution and on-farm efficiency actions, which is being presented concurrently with this Project. Further, Trout Unlimited (TU) and The Nature Conservancy are currently engaged in negotiations with DCID regarding securing the stream flow benefits from this and other projects through an instream flow dedication, downstream water transfer, or other mechanisms. As part of this project, TU will execute a long-term management agreement with DCID and develop detailed operating procedures to ensure that the Project is operated for stream flow benefit.

MANAGEMENT OBJECTIVES AND NEEDS

TU has drafted a 20-year Memorandum of Agreement (MOA) with DCID, which will be finalized prior to construction. The MOA and Operations Plan, which will also be developed during the grant period, will hold DCID responsible for long-term operation and maintenance of the headgate system, with TU ultimately responsible for ensuring all monitoring and maintenance activities are conducted and reported. If at any time during the 20-year life of the Project, TU does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

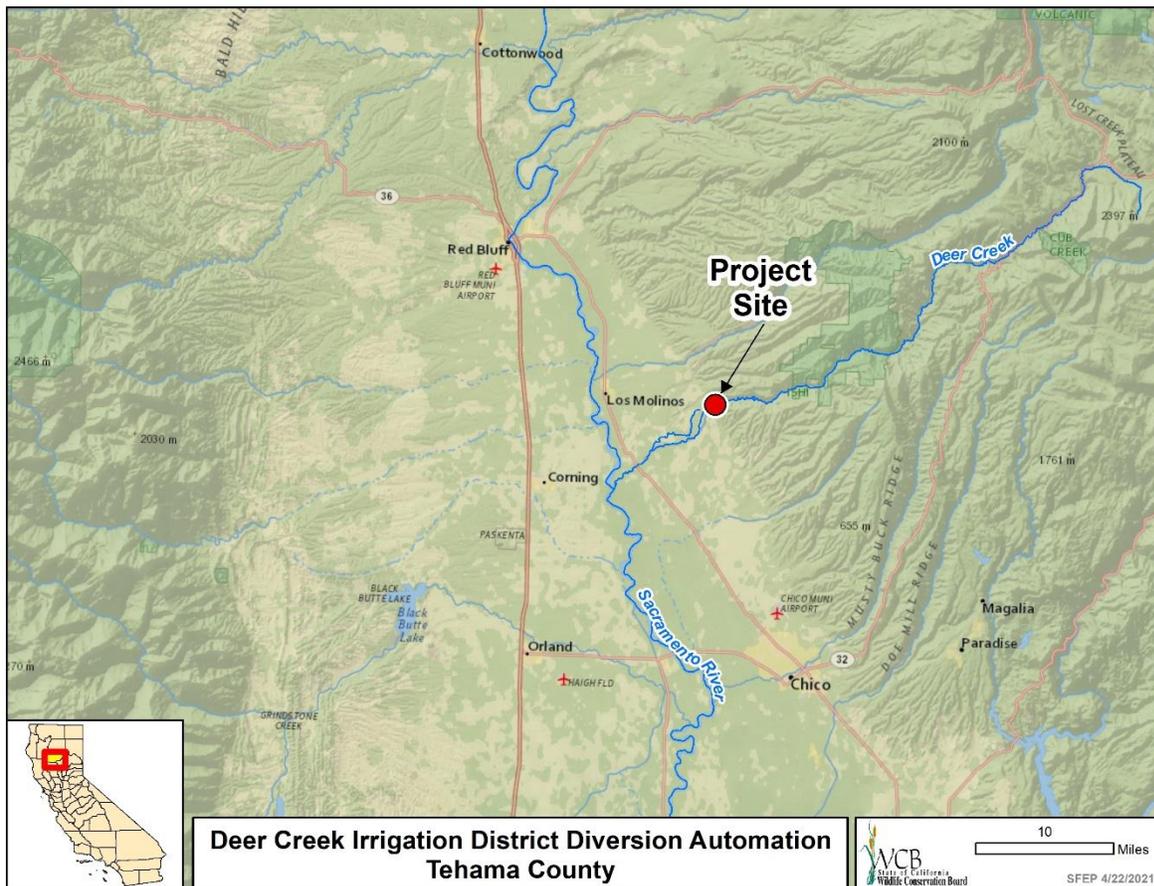
Partners	Amount
WCB	\$328,659
Other	\$64,587
Total	\$393,246

Project costs will be for project management, final design, construction, monitoring, and development of an operations plan.

Other secured funding sources include TU and DCID.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines Section 15303, Class 3, New Construction or Conversion of Small Structures, as installation of new equipment in an existing small structure. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



12. Deer Creek Meadow and Gurnsey Creek Restoration Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$724,836 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Deer Creek Meadow and Gurnsey Creek Restoration Planning
Project Type:	Planning
Applicant/Grantee:	Resource Conservation District of Tehama County
Amount Recommended:	\$724,836
Funding Partners:	Resource Conservation District of Tehama County, USFWS, Collins Pine Company
Landowner(s):	Collins Pine Company, Bell Ranch
County:	Tehama
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Deer Creek Meadow and Gurnsey Creek Restoration Planning project (Project) will focus on Bell Ranch within Deer Creek Meadows on the north fork of Deer Creek and Collins Pine Company land on Gurnsey Creek (Properties). The Properties are approximately 11 miles west of Chester in the Upper Deer Creek watershed in eastern Tehama County.

PROJECT DESCRIPTION

Numerous special-status species occur in the Upper Deer Creek watershed, including Cascades frog, sandhill crane, and willow flycatcher. Deer Creek's downstream waters of anadromy are home to listed salmonid species, including spring-run Chinook salmon and Central Valley steelhead trout.

Legacy livestock grazing activities within Deer Creek Meadows have led to severe streambank erosion, channel incision, and meadow degradation. Stream channel incisions have contributed to hydrologic disconnections between the channel and floodplain, leading to decreased flood flow inundation on the floodplain and loss of groundwater storage within the meadow and riparian area, impairing hydrological and ecological functions.

Future implementation projects resulting from this Project will include: 1) meadow restoration work within Deer Creek Meadows to enhance ecological and hydrologic function, and 2) the removal of two bridges which are unstable and no longer being used. The bridges are constructed of creosote-treated wood that is currently contributing to water quality impairment through leaching and dripping of creosote into the stream system. Should these bridges completely fail and fall into the

stream, it would likely cause additional water quality impacts to the meadow stream systems and potentially downstream portions of Deer Creek.

Deer Creek Meadows restoration activities will involve the use of in-stream structures, including beaver dam analogs, channel fill, large wood structures, and riffle augmentation, and the removal of an abandoned road through the meadow. Livestock exclusion fencing will be incorporated into the restoration efforts. Fencing will allow vegetation to recolonize the streambanks and prevent streambank erosion and further degradation to the meadow. The in-stream structures will induce sediment aggradation to reduce stream channel incision and restore hydrologic connectivity within the floodplain.

Implementation efforts developed from this Project will result in winter and spring flows within Deer Creek Meadows overtopping streambanks and flooding into the adjacent meadow. This overtopping will allow for greater water storage in meadow soils and the surrounding aquifer. As a result, ground water will be released out of Deer Creek Meadows more slowly and consistently throughout dry periods. More cool water will be released during summer months when water is needed most, improving flows and water quality conditions in Deer Creek. Bridge removal will also result in reduced water contamination and streambank erosion.

Specific planning activities to prepare for eventual restoration implementation are:

- Design/engineering – meadow restoration designs, bridge demolition designs, and raised road removal designs
- Environmental analysis and permitting – baseline survey work, permit applications, and CEQA and NEPA documents
- Monitoring – stream flow, water temperature, macroinvertebrate, and vegetation monitoring
- Geo-technical work – material testing of the two bridges for hazardous material, and testing of soil within the road embankment of the Deer Creek Meadow bridge

PROJECT FUNDING

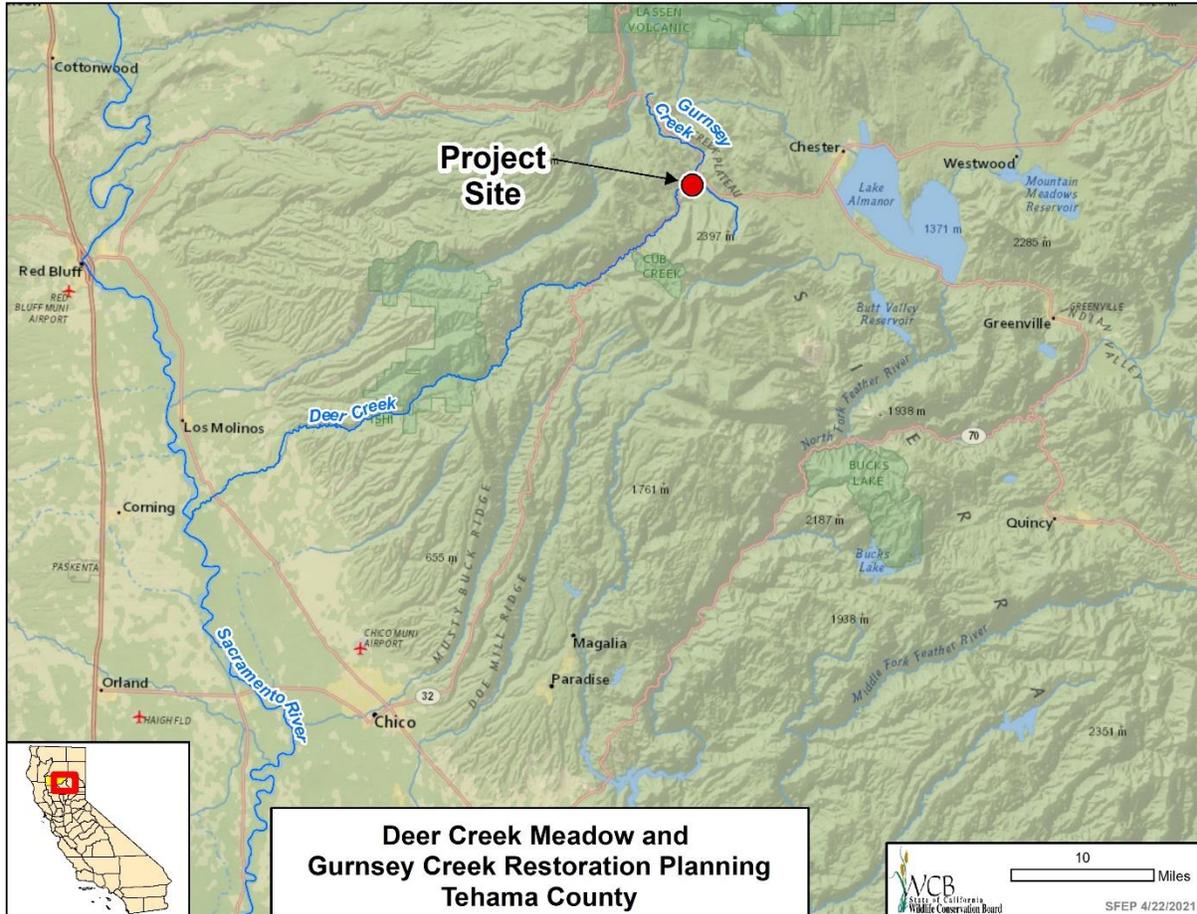
Partners	Amount
WCB	\$724,836
Other	\$186,211
Total	\$911,047

Project costs will be for design/engineering, environmental analysis and permitting, monitoring, geo-technical work, and project management.

Other secured funding sources include Resource Conservation District of Tehama County, USFWS, and Collins Pine Company.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



13. Butte Creek House Meadow Restoration Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$196,071 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Butte Creek House Meadow Restoration Planning
Project Type:	Planning
Applicant/Grantee:	Butte County Resource Conservation District
Amount Recommended:	\$196,071
Funding Partners:	None
Landowner(s):	California Department of Fish and Wildlife
County:	Butte
Strategic Plan:	Goals: B.1 Objectives: SI 1.6, 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Butte Creek House Meadow Restoration Planning project (Project) is focused on the approximately 320-acre CDFW Butte Creek House Ecological Reserve located on Butte Creek, 33 miles northeast of Chico in the upper northeast corner of Butte County. In 1988, WCB granted \$50,000 to CDFW to implement restoration actions within the Butte Creek House Meadow.

PROJECT DESCRIPTION

The Butte Creek House Meadow exhibits significant damage from a variety of past management practices (e.g., channelization, overgrazing, fire suppression, willow eradication, and beaver extirpation) which have led to degradation of the meadow and contributed to impaired flows into Butte Creek. In 1990, a series of check dams were placed in the main flow channel which helped retain spring runoff and improve aquatic habitat. These checks are now 30 years old and starting to show signs of failure and diminished performance. Even with the checks, this meadow continues to show signs of poor hydrologic function. Additionally, the meadow is next to an overly dense forest stand which reduces water infiltration and alters stream flow patterns. Furthermore, this high-density forest increases the risk of habitat destruction from high-intensity catastrophic wildfire.

To address these problems, the Project's planning efforts will promote enhanced stream flow and resilient forests through forest health treatments while simultaneously restoring meadow systems to enhance landscape function and ecological flows. Specifically, the Grantee will conduct the following actions which will lead to a shovel-ready implementation project:

- Conduct a geomorphic assessment of the historic stream channel
- Complete a meadow restoration design with a goal to restore hydrologic function

- Complete a timber harvest plan to thin the stand
- Complete CEQA compliance documents as lead agency
- Complete necessary Regional Water Quality Control Board permits, Streambed Alteration Agreement, and Pre-Construction Notification for Nationwide Permit 27 through the Corps of Engineers

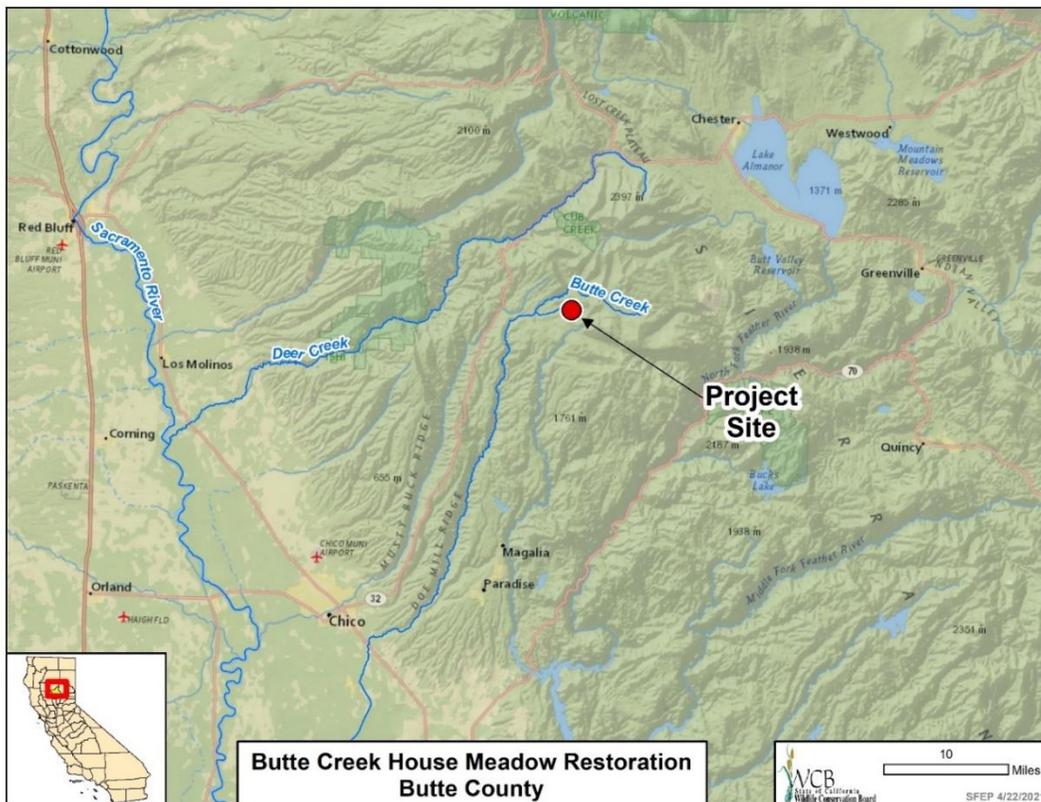
PROJECT FUNDING

Partners	Amount
WCB	\$196,071
Other	\$0
Total	\$196,071

Project costs will be for producing a meadow restoration plan, producing a timber harvest plan, completing CEQA compliance documents, obtaining all other necessary environmental permits, and administering the requirements of the grant.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



14. Upper Long Bar Restoration Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$865,456 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Upper Long Bar Restoration Planning
Project Type:	Planning
Applicant/Grantee:	South Yuba River Citizens League
Amount Recommended:	\$865,456
Funding Partners:	Bella Vista Foundation and U.S. Fish and Wildlife Service
Landowner(s):	Bureau of Land Management, Yuba River Properties, Long Bar Mine LLC, Western Aggregate
County:	Yuba
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The Upper Long Bar Restoration Planning project (Project) will focus on the Bureau of Land Management land and three private parcels owned by Yuba River Properties, Long Bar Mine LLC, and Western Aggregate located 13 miles northeast of Marysville immediately adjacent to the north side of the Yuba River in Yuba County.

PROJECT DESCRIPTION

Historically, the Yuba River supported large numbers of spring- and fall-run Chinook salmon and steelhead trout. However, the fisheries suffered enormous losses from the Gold Rush and dam construction. Approximately 684 million cubic yards of mining debris were washed into the Lower Yuba River by the early 20th century and the material remains there today. This hydraulic mining debris and associated dredge pilings inhibits natural processes such as regular floodplain inundation, prevents growth of riparian vegetation contributing to increased water temperatures, and limits channel complexity.

In addition, Englebright Dam located roughly ten miles upstream of the Project area, serves to further regulate flows, decreasing the frequency and timing of floodplain inundation while increasing water temperature, especially in summer months. Together, these factors represent serious flow-based limitations to the recovery of native salmon and steelhead populations in the Lower Yuba River.

The Project will conduct comprehensive planning for implementation actions which will maximize the ecologic benefit of the available flow from Englebright Dam through more frequent inundation of a restored floodplain. This will be achieved by enhancing off-channel habitat in remnant side channels and adjacent floodplain

areas through increased connectivity with the main channel, and improving natural habitat features and floodplain revegetation.

Planning activities that will be conducted to prepare for implementation are:

- Obtain signed landowner contracts and agreements for property access and construction
- Develop long-term management plans
- Conduct two community outreach meetings and create on-line resources
- Create a monitoring plan including research questions
- Conduct pre-project monitoring for biological and geomorphic data
- Create 65% restoration project designs
- Establish the CEQA lead agency and submit all required permits

While this Project is not capable of changing the release timing or discharge from Englebright Dam, enhancing floodplain connectivity and increased shading does promise to help improve water quality and enhance flow as droughts become more frequent in a changing climate.

PROJECT FUNDING

Partners	Amount
WCB	\$865,456
Other	\$53,429
Total	\$918,885

Project costs will be for project management, outreach, monitoring plan, pre-project monitoring, restoration design, and permitting.

Other secured funding sources include the Bella Vista Foundation and USFWS.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



15. Russian River Watershed Stream Gauging

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$261,316 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Russian River Watershed Stream Gauging
Project Type:	Scientific Study
Applicant/Grantee:	Trout Unlimited
Amount Recommended:	\$261,316
Funding Partners:	Trout Unlimited
Landowner(s):	N/A
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The Russian River is a southward-flowing river that drains 1,500 square miles of Mendocino and Sonoma counties. Originating in the mountains near Willits, its 110-mile long mainstem is joined by many tributaries before its mouth at the Pacific Ocean in Jenner. The watershed has historically supported steelhead trout, coho salmon and Chinook salmon, and in fact five of its tributary sub-watersheds (Dutch Bill, Green Valley, Mark West, Mill, and Grape creeks) were identified by the National Marine Fisheries Service (NMFS) as critical to the recovery of coho salmon.

PROJECT DESCRIPTION

TU has an established network of gauges distributed in tributaries of the lower Russian River that have been the focus of habitat and stream flow enhancement efforts to benefit coho salmon and other native salmonids. The gauge network provides stream flow and stage monitoring data primarily during the low flow season beginning in spring and extending to the winter runoff season. After several years in service, many of the gauges need maintenance, repair, or replacement. It is intended that this gauging program be maintained for several more years, during which stream flow enhancement projects will be implemented.

The Russian River Watershed Stream Gauging (Project) will improve 20 gauging sites by repairing and replacing equipment, installing local topographic benchmarks to ensure a stable gauge datum, and installing staff plates which read to 0.01 ft precision of water level and will be referenced to the local datum. At up to eight sites, staff plates will be extended to elevations sufficient to observe winter water levels to facilitate year-round stream flow gauging. These installations will ensure that pressure transducers are installed consistently at known elevations in relation to the gauge elevation datum. In addition, the stream cross-section will be

surveyed annually each spring at the gauge site to monitor bed elevation and evaluate effects of year-to-year changes in the streambed. Winter stream flow measurements will occur at eight winter gauge sites in four watersheds to support improvements in hydrologic models of Mark West, Mill, Green Valley/Atascadero, and Dutch Bill creek tributaries. Funding for hydrologic modeling at both Mark West and Mill creeks are funded through SFEP grants, Green Valley/Atascadero and Dutch Bill creeks were funded by CDFW's Fisheries Restoration Grant Program.

The stream gauging data collected through this study will be used to create annual hydrographs from continuous water level records, calibrated to periodic stream flow measurements made in the field. TU and partner O'Connor Environmental Inc. (OEI) will collaborate on evaluating stage-discharge data and establishing annual rating curves for each of the winter gauging sites. In addition, OEI and TU will coordinate and review annually regarding integration of the two different data sets (low-flow data collected by TU and high-flow data collected by OEI) to establish the most accurate continuous record of stream flow in these four watersheds identified as Core Areas for coho salmon in the lower Russian River watershed. Having this level of data available for the watershed will greatly benefit the development of future stream flow enhancement projects.

PROJECT FUNDING

Partners	Amount
WCB	\$261,316
Other	\$16,580
Total	\$277,896

Project costs will be for improvements to TU's stream gauging network in the Russian River watershed, and three years of data collection and analysis.

Other secured funding sources include TU.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15301, Existing Facilities, as repair and maintenance of existing facilities and mechanical equipment and Section 15306, Class 6, Information Collection, as data collection, research, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



16. Green Valley Creek Rural Water Conservation Project, Phase II

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$870,121 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Green Valley Creek Rural Water Conservation Project, Phase II
Project Type:	Implementation
Applicant/Grantee:	North Coast Resource Conservation and Development Council
Amount Recommended:	\$870,121
Funding Partners:	National Fish and Wildlife Foundation, Landowners
Landowner(s):	Multiple private
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The Green Valley Creek Rural Water Conservation Project, Phase II (Project) will be implemented on four rural residential properties in Sonoma County. Each property is adjacent to Green Valley Creek, a tributary to the lower Russian River. The watershed is impacted by extensive agricultural and rural residential development.

PROJECT DESCRIPTION

Green Valley Creek, a critical coho salmon rearing stream, is impaired by low flows and dry reaches in the late summer months. Ongoing stream flow studies have shown that relatively small amounts of water, as low as 0.2 cfs during critical periods, can boost juvenile coho survival by maintaining summer pool depths and connectivity. Properties in the watershed source their water from surface diversions or shallow alluvial wells adjacent to the stream.

Since 2010, a group of organizations known collectively as the Russian River Coho Partnership, has continued monitoring, outreach, planning, and implementation of stream flow enhancement projects in priority reaches. Completed and ongoing flow enhancement projects in the Green Valley Creek watershed, supported by WCB SFEP grants, include construction of 255,000 gallons of rainwater catchment water storage (Phase I) and designs for a three-million-gallon storage and forbearance project at Mt. Gilead Bible Camp and Conference Center.

The Project will continue these efforts by implementing four additional rainwater catchment designs on rural residential properties, each designed to eliminate May-October alluvial well withdrawals. The four designs total over 220,000 gallons of water storage. Additionally, the Project will continue stream flow monitoring efforts

as part of the Green Valley Creek Streamflow Restoration Monitoring and Assessment Program to characterize dynamic hydrologic conditions and programmatically evaluate the flow restoration activities in upper Green Valley over the long run.

MANAGEMENT OBJECTIVES AND NEEDS

Participating landowners will sign 20-year agreements detailing their responsibilities in maintaining and operating the new infrastructure. Forbearance agreements will be recorded to their property deed, in which they will agree to not withdraw water from the creek and alluvial wells during the May to October low-flow season. If at any time during the 20-year life of the Project, the North Coast Resource Conservation and Development Council does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

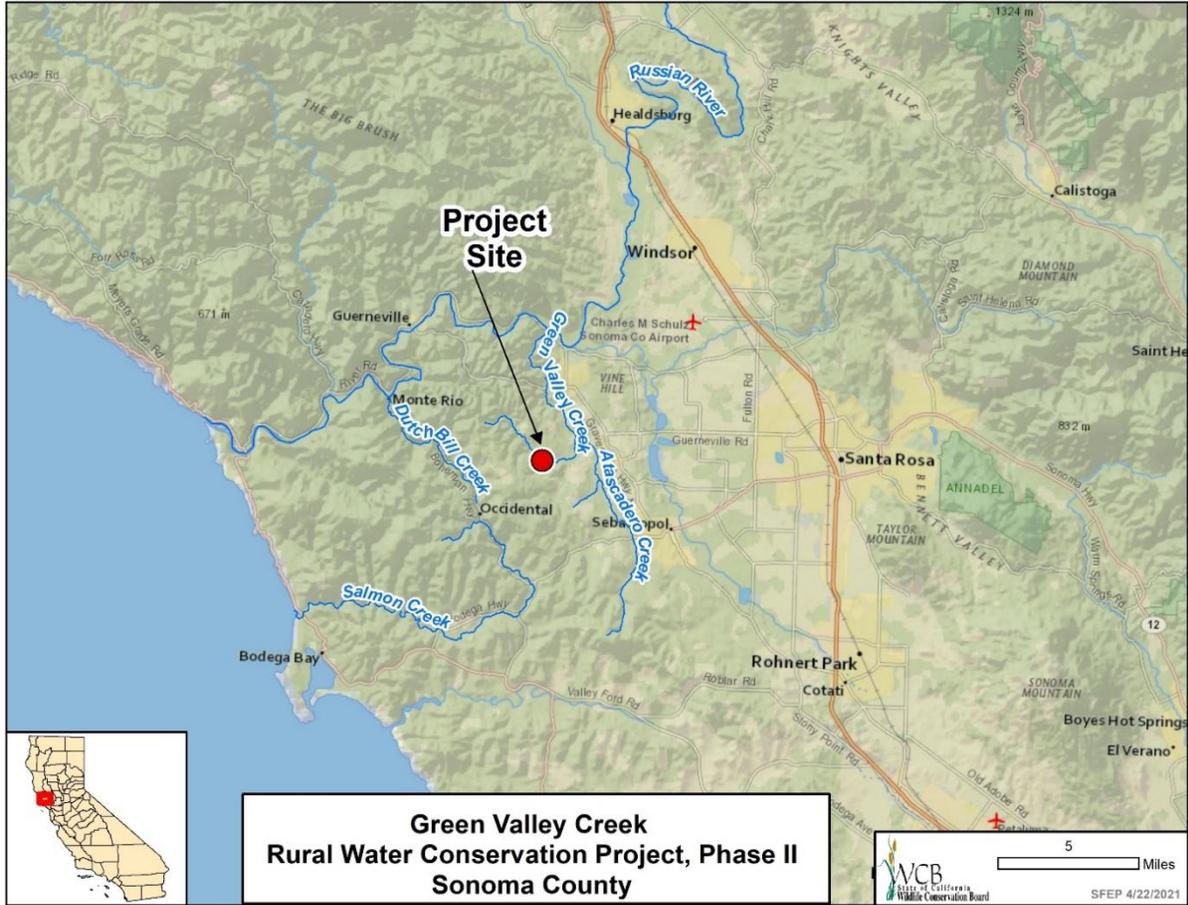
Partners	Amount
WCB	\$870,121
Other	\$80,000
Total	\$950,121

Project costs will be for the construction of four rainwater catchment systems, and the associated project management, permitting, and stream flow monitoring.

Other secured funding sources include National Fish and Wildlife Foundation and Landowner cost share.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15303, Class 3, New Construction or Conversion of Small Structures, as new construction of water storage tanks. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



17. Lower Atascadero and Green Valley Creek Flow and Habitat Enhancement Master Plan

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$496,519 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Lower Atascadero and Green Valley Creek Flow and Habitat Enhancement Master Plan
Project Type:	Planning
Applicant/Grantee:	Coast Range Watershed Institute
Amount Recommended:	\$496,519
Funding Partners:	CDFW, National Fish and Wildlife Foundation, Sonoma County Water Agency
Landowner(s):	Multiple private
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Green Valley Creek is a tributary to the lower Russian River and is largely divided into upper Green Valley (above the confluence of its tributary, Atascadero Creek) and lower Green Valley (below Atascadero Creek to the Russian River).

Atascadero Creek flows in a northerly direction, west of the city of Sebastopol, joining with Green Valley Creek near the town of Graton. The Lower Atascadero and Green Valley Creek Flow and Habitat Enhancement Master Plan (Project) will focus on the lowest 2.7 miles of Atascadero Creek and upper 0.8 miles of lower Green Valley Creek. This area contains five target project sites; Site 1 is just south of Graton on Atascadero Creek, Sites 2 and 3 are just above the confluence on lower Atascadero Creek, and Sites 4 and 5 are below the confluence on lower Green Valley Creek.

PROJECT DESCRIPTION

Green Valley Creek is one of four priority streams considered critical to the recovery of coho salmon in the Russian River watershed. Monitoring efforts have shown that Green Valley Creek consistently produces larger and more abundant juvenile salmonids than any other watershed in the lower Russian River. Green Valley Creek salmonids are believed to utilize lower Atascadero Creek as well, for its high-quality winter refugia and low gradient. However, hydrologic conditions in the lower Atascadero Creek and lower Green Valley Creek have been dramatically altered by historical management practices and ongoing geomorphic change. The streams are characterized by abrupt changes in channel conveyance resulting from inconsistent dredging practices, accumulation of sediment and associated stream flow and water quality impairment, and floodplains disconnected from their

channels by berm construction and other historical practices. These conditions limit the value of the habitat in lower Atascadero and Green Valley creeks as well as restrict access to spawning grounds in the upper Astacadero Creek watershed.

The Project will address several key limiting factors for salmonids in Green Valley and Atascadero creeks including insufficient stream flow, impaired water quality, and the presence of migration barriers and stranding risks. Removal of recently-accumulated sediment through future implementation actions will convert much of the perennially-inundated wetlands in lower Atascadero to seasonally-inundated wetlands, reversing the trend of the past few decades. This is expected to significantly reduce the development of anoxic conditions and substantially improve the impaired water quality conditions in the reach. Five key sites have been identified within the reach representing locations believed to be driving stream flow and water quality impairment and/or locations with high potential for substantial habitat enhancement. Final design plans have already been completed for two of these sites and are in process for a third site. This Project seeks to develop designs for the two additional sites as well as obtain CEQA compliance for all five sites with the end goal of advancing the projects to implementation. Once implemented, the five identified projects will enhance summer and winter baseflows by re-connecting perennial tributaries and removing a series of flow obstructions, improving water quality by reversing recent conversion from perennial to seasonal wetlands and associated anoxic conditions, and increasing availability of off-channel winter rearing habitat and reducing stranding risk for salmonids.

PROJECT FUNDING

Partners	Amount
WCB	\$496,519
Other	\$260,000
Total	\$756,519

Project costs will be for site mapping, hydraulic and water quality monitoring, habitat assessments, design development for two project sites, and CEQA compliance for five project sites.

Other secured funding sources include CDFW, National Fish and Wildlife Foundation, and Sonoma County Water Agency.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



18. Decision Support Tool for Flow Enhancement in Green Valley, Atascadero, and Dutch Bill Creeks

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$151,685 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Decision Support Tool for Flow Enhancement in Green Valley, Atascadero, and Dutch Bill Creeks
Project Type:	Scientific Study
Applicant/Grantee:	Coast Range Watershed Institute
Amount Recommended:	\$151,685
Funding Partners:	CDFW, National Fish and Wildlife Foundation, Sonoma County Water Agency
Landowner(s):	Multiple
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Green Valley and Dutch Bill creeks are tributaries to the Russian River in Sonoma County. Both have been designated as priority watersheds for stream flow enhancement efforts and coho recovery. Atascadero Creek is a tributary to Green Valley Creek and is hydrologically connected to the Santa Rosa Plain. The study area encompasses all three streams, which lie to the west of Santa Rosa. Green Valley Creek enters the Russian River near the town of Forestville, and the Dutch Bill Creek confluence with the Russian River is further downstream in Monte Rio.

PROJECT DESCRIPTION

The NMFS Central California Coast Coho Recovery Plan identifies the Green Valley and Dutch Bill Creek watersheds as Core Areas for habitat protection and restoration. Insufficient summer baseflows, lack of high-quality pool habitat, and lack of winter refugia have all been identified as limiting factors throughout the study area watersheds. Portions of the Atascadero Creek watershed are experiencing the fastest rates of new groundwater development in Sonoma County, and the study watersheds have become a focus of county and state agencies tasked with regulating new water uses while ensuring sustainability of water supply and habitat conditions. Additionally, the Atascadero Creek watershed is adjacent to and hydrologically interconnected with the Santa Rosa Plain where development of a Groundwater Sustainability Plan is currently underway.

The combination of the importance of these watersheds, the active and engaged landowner and restoration community, and the complexities of understanding surface-groundwater interactions make this an ideal location for implementing a

holistic management approach guided by an effective Decision Support Tool (DST). Decision Support Tool for Flow Enhancement in Green Valley, Atascadero, and Dutch Bill Creeks (Project) will utilize a hydrologic modeling-based DST for addressing insufficient summer baseflows as a limiting factor for salmonids and will also assist in guiding ongoing efforts to address pool habitat and winter refugia limitations. This will increase survival rates for juvenile salmonids by reducing or eliminating the elevated temperature and low dissolved oxygen conditions that can develop during episodes of discontinuous flow.

The Project builds on previous work which developed a hydrologic model to quantify spatial and temporal variations in stream flows and prioritize reaches based on flow-related salmonid habitat suitability metrics. The existing model represents a valuable starting point for developing a DST to guide water management and flow enhancement efforts in the watersheds. However, at the time of model development, limited information was available regarding existing sources and rates of water use, which prohibited full application of the model in the previous effort. These elements were represented with generalized parameters and assumptions. Therefore, the previous model predictions contain a relatively high degree of uncertainty. Since completion of that initial study, a significant amount of new data has become available to assist with characterizing water uses and existing conditions. This Project focuses on updating the existing hydrologic model to more accurately represent groundwater and surface water uses and perform a more robust calibration, and then applying the model as a DST to evaluate the effectiveness of already implemented flow release and diversion reduction projects, identify and prioritize strategies and locations for future stream flow enhancement work, and generate annual flow forecasts for emergency drought planning.

PROJECT FUNDING

Partners	Amount
WCB	\$151,685
Other	\$20,000
Total	\$171,685

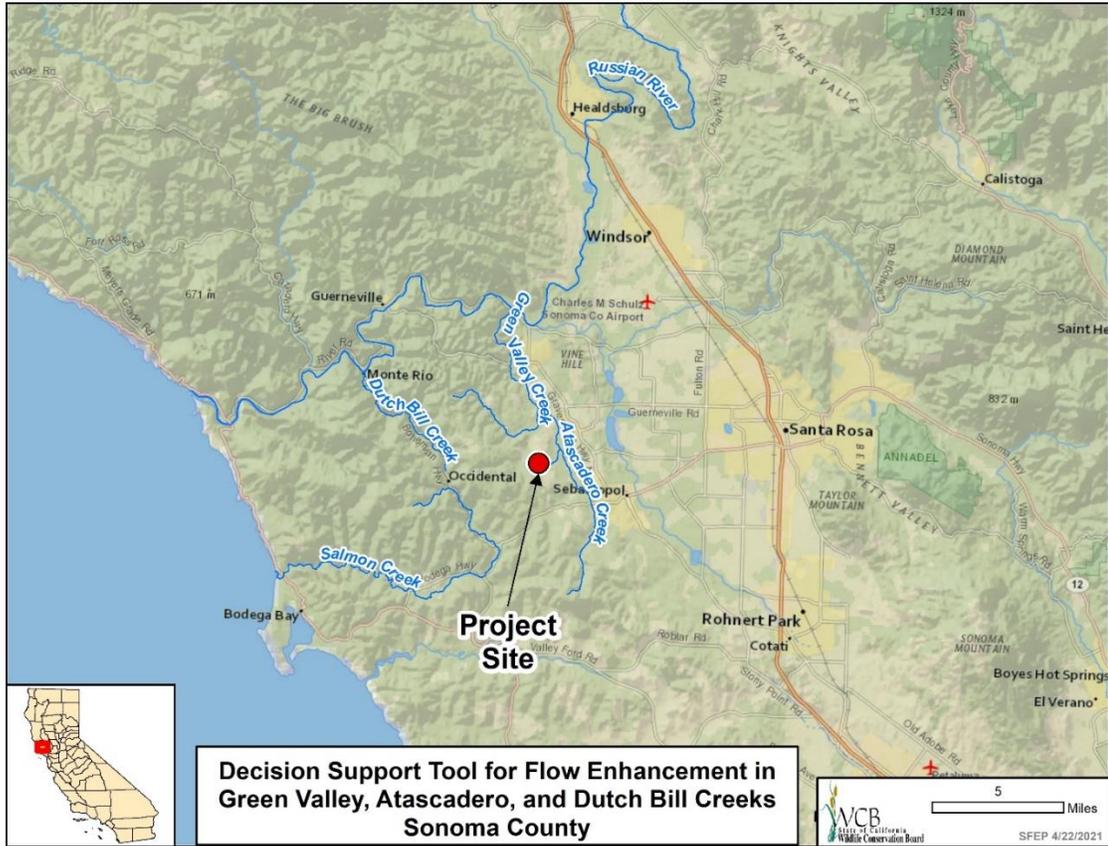
Project costs will be for model development and calibration, analysis and project effectiveness evaluation, restoration recommendations and forecasts, project management, and public outreach.

Other secured funding sources include CDFW, National Fish and Wildlife Foundation, and Sonoma County Water Agency.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of

this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



19. Green Gulch Farm Water Storage and Flow Enhancement Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$887,320 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Green Gulch Farm Water Storage and Flow Enhancement Planning
Project Type:	Planning
Applicant/Grantee:	San Francisco Zen Center
Amount Recommended:	\$887,320
Funding Partners:	San Francisco Zen Center, Trout Unlimited
Landowner(s):	San Francisco Zen Center
County:	Marin
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Green Gulch Farm (Farm) is a meditation and retreat center with an organic farm and garden, offering a variety of programs including environmental education, gardening, apprenticeships, and family programs. The property is located in Marin County along Highway 1 overlooking Muir Beach. It is adjacent to Green Gulch Creek, which connects with Redwood Creek just upstream of its opening to the Pacific Ocean.

PROJECT DESCRIPTION

Redwood Creek has one of the few remaining native populations of endangered California Central Coast ESU coho salmon in the North Bay area. Sufficient stream flow in the spring and summer months is critical for providing high-quality rearing habitat for juvenile coho and steelhead. The Green Gulch Farm Water Storage and Flow Enhancement (Project) will prepare engineered designs and secure the regulatory permits and water rights modifications required to implement needed improvements to the water supply and distribution system for the San Francisco Zen Center's Green Gulch Farm. This Project began with planning funds from WCB SFEP to complete a feasibility study and analysis of historic and future water demand at the Farm. The Project has two primary goals: to remove an existing on-channel reservoir and significantly reduce or eliminate direct surface diversion during critical stream flow periods, and to provide sufficient and reliable water supply and storage to sustainably run the Farm through future droughts and climate change. The design alternatives will be thoroughly summarized in a water supply and conservation plan. The preferred water supply alternative is to significantly increase the storage capacity of two hillside (off-channel) reservoirs and decommission Zendo Pond, the on-channel reservoir. A third off-channel reservoir may be needed. The aging distribution piping system will also need to be

redesigned for efficiency. Once implemented, the Project will limit direct diversions from Green Gulch Creek to the greatest extent feasible and minimize potential system leakage and inefficient water use.

PROJECT FUNDING

Partners	Amount
WCB	\$887,320
Other	\$16,294
Total	\$903,614

Project costs will be for project design, collection of baseline data, completing CEQA compliance, and obtaining the necessary permits and water rights changes.

Other secured funding sources include the San Francisco Zen Center and TU.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



20. Online Water Availability Tool

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$551,255 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Online Water Availability Tool
Project Type:	Scientific Study
Applicant/Grantee:	The Nature Conservancy
Amount Recommended:	\$551,255
Funding Partners:	The Nature Conservancy and Trout Unlimited
Landowner(s):	Multiple
County:	Marin, Sonoma, Napa, Mendocino, and Humboldt
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The geographic scope of the Online Water Availability Tool project (Project) encompasses the area (Policy Area) covered under SWRCB's 2014 Policy for Maintaining Instream Flows in Northern California Coastal Streams. The Policy Area covers coastal streams from the Mattole River to San Francisco and coastal streams entering northern San Pablo Bay, within Marin, Sonoma, and portions of Napa, Mendocino, and Humboldt counties.

PROJECT DESCRIPTION

Flows in many Northern California coastal streams drop to critical levels or dry up entirely during the dry season. Though water is usually plentiful in the winter, water demand in the dry season routinely exceeds the limited supply. To address this temporal mismatch in supply and demand, a diverse array of entities is working with water users to implement voluntary measures designed to improve stream flow and habitat conditions for listed salmonids, such as coho salmon and steelhead trout. One example is implementing actions to increase local winter water storage capacity and shift the timing of diversion from the dry to the wet season. In most cases, this transition requires a new water right or modifications to an existing one.

The SWRCB's Policy for Maintaining Instream Flows in Northern California Coastal Streams requires that new appropriative water right applications provide a Water Availability Analysis, consisting of a Water Supply Report (which quantifies the amount of unappropriated water remaining instream after senior rights are accounted for) and a Cumulative Diversion Analysis (which uses instream flow criteria to evaluate the effects of the proposed project, in combination with existing diverters, on instream flows needed for protection of fishery resources). Significant time and effort are associated with preparing these analyses, including data

collection, analysis, and reporting by trained professionals. Currently, the preparation of each water availability analysis is a stand-alone activity performed for each proposed project, with no widely available efficient tool to perform such analyses. Securing SWRCB approval for these analyses in water rights permitting can be a lengthy process, even for projects designed to enhance conditions for fish and wildlife.

The Project will develop an easily accessible tool, using a common set of data, tools, and assumptions that will allow practitioners, landowners, and government agencies to more efficiently answer questions related to water availability. The specific objective is to create an online decision support tool to evaluate water supply and demand in the Policy Area and provide water availability analysis information necessary to develop and permit flow enhancement projects at an increased pace and scale.

The decision support tool will be built using the best available data and scientific methods, in conformance with approaches allowed under the SWRCB's Policy for Maintaining Instream Flows in Northern California Coastal Streams. This will involve building on a body of peer-reviewed research, including work on methods related to predicting unimpeded stream flow, identification of ecological flow thresholds, assessing existing water rights cumulatively in context of natural supply, and supporting water availability and allocation decisions using web-based technology. Project partners will work closely with practitioners and regulatory decision-makers to understand information needs, accessibility requirements, and formatting or other requirements in order to ensure the tool will best support/meet the needs of target users. Outreach and communication regarding the decision support tool will occur through multiple venues, such as webinars, workshops, and/or other strategies to build broad awareness of the availability and utility of the tool.

PROJECT FUNDING

Partners	Amount
WCB	\$551,255
Other	\$119,501
Total	\$670,756

Project costs will be for project management, decision support tool development, and outreach and communication.

Other secured funding sources include The Nature Conservancy and TU.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of

this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



21. Escuela Ranch Water Resilience and Flow Enhancement Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$150,154 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this Project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Escuela Ranch Water Resilience and Flow Enhancement Planning
Project Type:	Planning
Applicant/Grantee:	Central Coast Salmon Enhancement doing business as Creek Lands Conservation
Amount Recommended:	\$150,154
Funding Partners:	Creek Lands Conservation, California Polytechnic State University, Coastal San Luis Resource Conservation District, and Hicks Law
Landowner(s):	California Polytechnic State University
County:	San Luis Obispo
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Escuela Ranch Water Resilience and Flow Enhancement Planning project (Project) is located on Escuela Ranch, which is owned by California Polytechnic State University (Cal Poly). Escuela Ranch is located eight miles north of Cal Poly's main campus in San Luis Obispo, in San Luis Obispo County. Pennington Creek flows southwest across Escuela Ranch, before reaching its confluence with Chorro Creek, which flows into Morro Bay.

PROJECT DESCRIPTION

In 2012, a Rainwater Harvesting Demonstration Project was implemented at Escuela Ranch and four, 74,000-gallon tanks were constructed to demonstrate the practicality of using stored rainwater for agricultural utilization in order to reduce riparian well diversions along Pennington Creek during dry months. Pennington Creek is critical habitat for federally threatened South-Central California coast steelhead trout. Improving stream flow in Chorro Valley for South-Central California coast steelhead is an important recovery objective in the federal recovery plan. However, an evaluation of the existing tanks, funded by a WCB SFEP grant (2016) to Central Coast Salmon Enhancement, found that rainwater at the site is insufficient to fill the existing tanks, even in very wet years. As a result, one to three tanks remain dry in most water year types.

The Project will conduct necessary planning activities to support implementation of the recommendations identified during the evaluation of the existing tanks, to expand and improve the existing rainwater harvesting system. This includes

preparation of a Water Availability Analysis, steelhead habitat assessment, intermediate (65%) and draft final (95%) design plans, and an appropriative water right application. Implementation of the Project, through a future phase, will remedy this situation by diverting peak winter floods from Pennington Creek to fill existing tanks, as well as one to three additional tanks. This increase in the volume of water captured and stored will allow Cal Poly to offset all non-potable water use from riparian wells from July to November, except in extreme drought years.

This will directly benefit Pennington Creek in the late spring and dry season. The riparian wells currently utilized by Cal Poly draw from water 12 to 15 feet below the ground surface along the banks of Pennington Creek. Due to the proximity of the wells to the stream and the shallow well depth, it is assumed that water pumped from the wells is drawn from the stream underflow, which is directly hydrologically connected to stream flow. The elimination of pumping from the wells is expected to improve water elevations and flows during times of non-pumping.

The implementation phase that results from this Project will reduce drawdown in the water table adjacent to Pennington Creek and thus improve the contribution of groundwater to the channel in dry months. In addition, the rainwater harvest and peak flow diversion tanks are highly significant to stream flow enhancement efforts on the Central Coast as they serve as a key demonstration project on a university campus with working lands. The ability to showcase water management solutions that meet both human water needs and enhance stream flow during critical ecological periods is key to establishing these efforts regionally.

PROJECT FUNDING

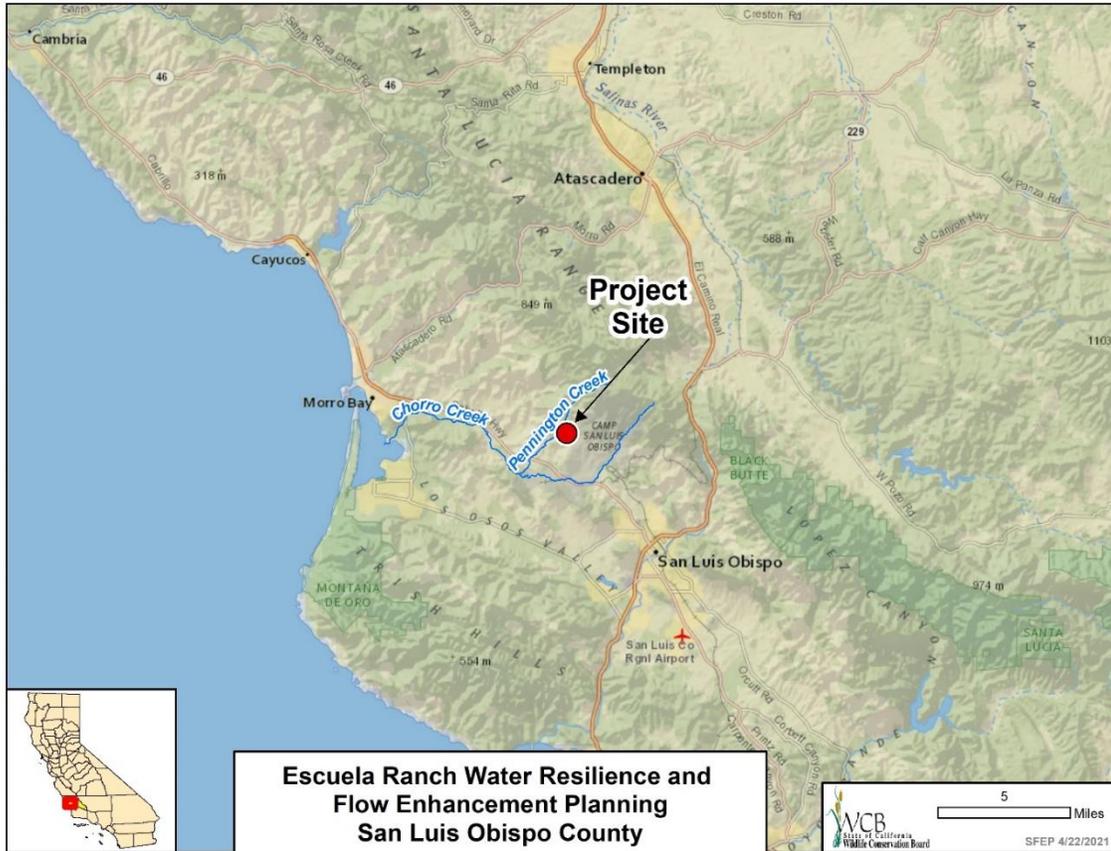
Partners	Amount
WCB	\$150,154
Other	\$43,123
Total	\$193,277

Project costs will be for project management, assessments and designs, water rights due diligence, and development of an appropriative water right application.

Other secured funding sources include Creek Lands Conservation, Cal Poly, Coastal San Luis Resource Conservation District, and Hicks Law.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



22. Otay Valley Regional Park Hydrology Study and Restoration Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$892,051 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Otay Valley Regional Park Hydrology Study and Restoration Planning
Project Type:	Planning
Applicant/Grantee:	City of San Diego
Amount Recommended:	\$892,051
Funding Partners:	City of San Diego
Landowner(s):	City of San Diego, County of San Diego, City of Chula Vista
County:	San Diego
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The Otay Valley Regional Park Hydrology Study and Restoration Planning project (Project) is focused on public lands along the Otay River corridor in the lower Otay Valley centered approximately 13 miles southeast of downtown San Diego in southwestern San Diego County.

PROJECT DESCRIPTION

Existing hydrologic conditions in the lower Otay River Valley have largely been shaped by intensive resource extraction activities over the past century, resulting in degradation of riparian and wetland habitats. Today, the majority of the lower Otay River Valley is conserved land under the regional Multiple Species Conservation Program and is managed as part of the Otay Valley Regional Park through a Joint Exercise of Powers Agreement between the City of San Diego, the City of Chula Vista, and County of San Diego. Although the land is now protected from further intensive use, substantial restoration efforts are needed to restore ecosystem function to the river and associated habitats.

The Project will lay the groundwork for future ecological restoration in the lower Otay River Valley by:

1. Providing a comprehensive assessment of existing physical and biological conditions to identify priority areas for restoration;
2. Performing detailed assessments (i.e., wetland delineations, hydraulic modeling) for each priority area to determine key restoration strategies such as recontouring, trail improvements, removal of invasive species, and revegetation; and

3. Preparing 10 site-specific conceptual restoration plans for each of the priority areas.

The end-goal of this proposed Project will be to prepare a set of plans for restoration projects that will enhance stream flows and water quality as well as wetland habitat for wildlife, including some sensitive species (i.e., least Bell's vireo and light-footed Ridgeway's rail) that reside in the lower Otay River Valley.

Specific actions to fully plan for shovel-ready implementation projects are:

- Investigation of existing and historical hydrology and topography
- Selection of priority restoration sites
- Hydraulics investigation
- Baseline wetland delineations at priority restoration sites
- Baseline water quality testing near priority restoration sites
- Creation of restoration site planning document
- Conceptual restoration projects plan preparation

PROJECT FUNDING

Partners	Amount
WCB	\$892,051
Other	\$55,905
Total	\$947,956

Project costs will be for investigations, planning, site selection, restoration designs, and project management.

Other secured funding source is the City of San Diego.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



Proposed Items

23. Salmonid Habitat Acquisition on East Fork Scott River

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$3,200,000 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Salmonid Habitat Acquisition on East Fork Scott River
Project Type:	Acquisition Fee Title (6,095± acres)
Applicant/Grantee:	The Wildlands Conservancy
Amount Recommended:	\$3,200,000
Funding Partners:	The Wildlands Conservancy
Landowner(s):	Trust for Public Land
County:	Siskiyou
Strategic Plan:	Goals: A.1, A.2, B.1 Objectives: SI 1.2, 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Salmonid Habitat Acquisition on East Fork Scott River project (Project) will acquire the 6,095± acre Hayden Ranch (Property), located near Callahan, in Siskiyou County. The Property is a working landscape that includes a diverse matrix of forest, meadow, riverine, and upland habitats; and encompasses portions of East Fork Scott River, Noyes Valley Creek, and Big Mill Creek. Elevations within the Property range from approximately 3,200 to 5,500 feet above mean sea level. Its location provides important connectivity with public (federal) and other conserved lands.

PROJECT DESCRIPTION

The Wildlands Conservancy is partnering with The Trust for Public Land to secure this conservation opportunity. The Wildlands Conservancy will be the long-term owner and steward of the Property. Aquatic habitats within and adjacent to the Property provide significant spawning and rearing opportunities for California Endangered Species Act listed coho and Chinook salmon, as well as habitat for steelhead trout, and a suite of riparian nesting birds. In addition, the Hayden Ridge portion of the Property serves as a migration corridor for black-tailed deer, and most recently, Roosevelt elk have been observed moving onto the Property to graze the meadows.

Previously, the Hayden Ranch implemented water use efficiency improvements, including replacement of an unlined ditch with a pipeline and changes in irrigation practices, which reduced conveyance and on-farm water losses allowing for a portion of the water rights (3.2 cubic feet per second [cfs]) to be dedicated instream

pursuant to California Water Code Section 1707 (approved by SWRCB in 2011). The Project will support these earlier efforts and strengthen their intended benefits for stream flow enhancement.

Once the acquisition is complete, The Wildlands Conservancy will petition SWRCB under California Water Code Section 1707 for a permissive instream dedication on the remainder of the water rights. The Wildlands Conservancy intends to permanently dedicate at least 50% of the water rights (approximately 3 - 5 cfs, depending on season) for instream benefit. In addition, during Critical Water Years, all available water rights will be committed to instream uses beginning June 1, which would total approximately 10.88 cfs (June 1 – June 30), and 7.68 cfs (July 1 – Oct 15), except for the water necessary to keep residences livable, recreational facilities functional, and agricultural stock water available for ranching operations, which is estimated to be at or less than 0.01 cfs combined across all rights. The instream dedication will be coupled with a conservation easement that defines the terms for leaving water instream in perpetuity and will deliver enduring stream flow enhancements. The habitat focus of the stream flow enhancements is to improve summer rearing conditions for juvenile coho salmon and migration for fall run Chinook salmon.

The Wildlands Conservancy will work directly with CDFW to use best available science to inform decisions regarding water and other natural resources via the development of a Preserve Management Plan that focuses on salmonid habitat stream improvements, diversion and instream water quality monitoring, and prescriptive management of the Property's grazing program and forest ecosystems, among other management actions. Additional objectives of the acquisition are to maintain working landscapes and a sustainable ranching tradition, and to increase public access and recreational opportunities.

MANAGEMENT OBJECTIVES AND NEEDS

The Wildlands Conservancy will be the owner in fee simple and will develop and adopt a Preserve Management Plan that guides management actions for the Property. The Wildlands Conservancy will be responsible for implementing monitoring, management, and maintenance activities in perpetuity.

PROJECT FUNDING

Partners	Amount
WCB	\$3,200,000
Other	\$30,000
Total	\$3,230,000

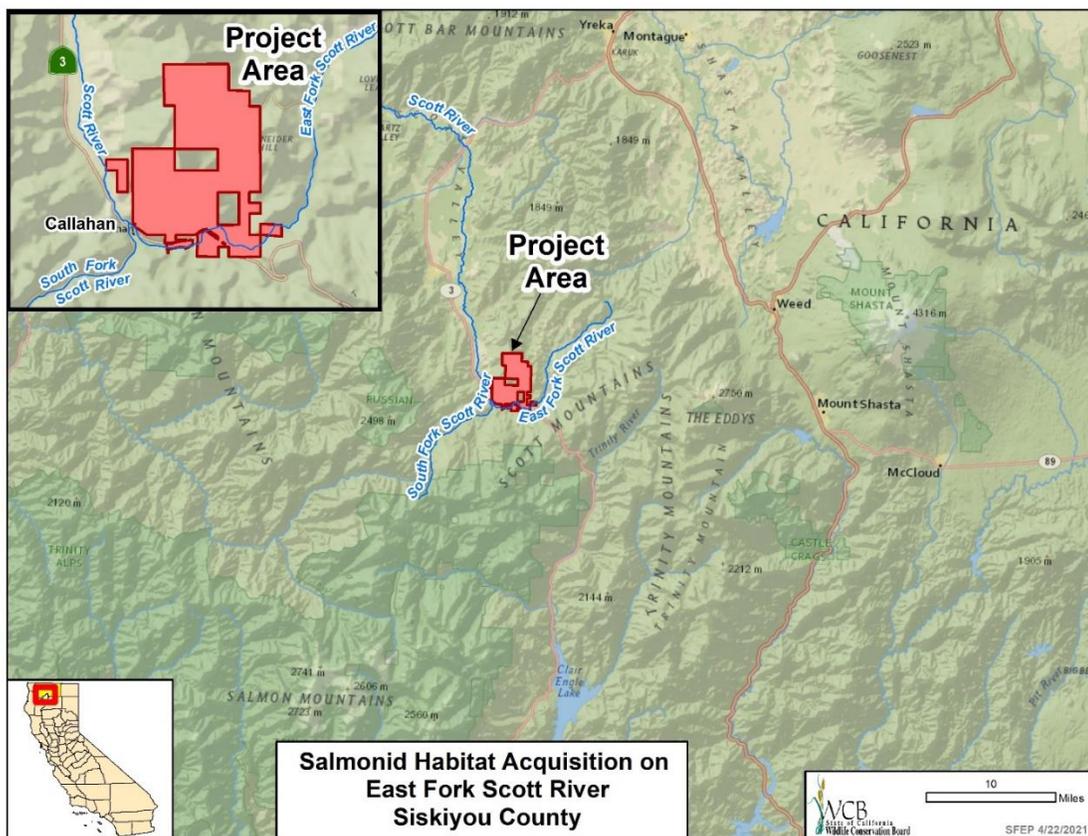
The purchase price will be at or below fair market value as determined through a Department of General Services (DGS) approved appraisal.

The majority of the project costs will be for acquiring the Property. Additional project costs are for project management, instream dedication, monitoring, preserve management planning, and related activities.

Other secured funding sources include The Wildlands Conservancy.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15313, Class 13, Acquisition of Lands for Wildlife Conservation Purposes, as an acquisition of land for wildlife conservation purposes; Section 15325, Class 25, Transfers of Ownership in Land to Preserve Existing Natural Conditions, as a transfer of an ownership interest in land to preserve open space and existing natural conditions, including plant or animal habitats; Section 15301, Class 1, Existing Facilities, as maintenance of stream flows to protect fish and wildlife resources; and Section 15304, Class 4, Minor Alterations to Land, as a minor alteration to water. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



24. Grenada Irrigation District Flow Enhancement

STAFF RECOMMENDATION

Staff recommends that WCB adopt the written findings and approve this project as proposed; allocate \$6,301,115 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Grenada Irrigation District Flow Enhancement
Project Type:	Implementation
Applicant/Grantee:	Grenada Irrigation District
Amount Recommended:	\$6,301,115
Funding Partners:	None
Landowner(s):	Grenada Irrigation District and Private
County:	Siskiyou
Strategic Plan Goals:	B.1 Objectives: SI 2.3, 2.4, 5.1
Disadvantaged Community:	Within a disadvantaged community

LOCATION

Grenada Irrigation District (GID), a Special District of Siskiyou County, is located in Northern California about 40 miles south of the Oregon border. GID's boundaries encompass approximately 4,144 acres, with a north/south orientation, approximately 2-3 miles west of the Shasta River. GID's point of diversion is located on the Shasta River approximately 3.5 miles southeast of Grenada. In 2011, WCB contributed \$1,500,000 towards removal of GID's flashboard dam from the Shasta River and construction of a roughened channel and pump station with a fish screen that met NMFS and CDFW criteria.

PROJECT DESCRIPTION

The Shasta River was historically a very productive salmon stream. Groundwater from cold, nutrient-rich springs provided nearly ideal habitat conditions that supported large Chinook and coho salmon populations. However, aquatic and riparian habitat degradation along the Shasta River and its tributaries has resulted in dramatic declines in wild salmon populations. The SONCC Coho Salmon Recovery Plan identifies seasonally impaired water quality and altered hydrologic function as key stressors on SONCC coho salmon in the Shasta River.

GID provides water diverted from the Shasta River to over 60 users who irrigate up to approximately 1,477 acres. GID has a SWRCB permit (A000448, permit no. 000501) to divert up to 40 cfs from April 1 through October 1 of each year. GID's permitted right is also identified in the Shasta River Decree (#7035) as Diversion #249 (Paragraph 149). While GID's water right is large in volume, it is low in priority. Under recent use, GID will routinely divert up to 40 cfs for short periods of time to fill the ditch and catch up on rotation. During wetter than average years, GID diverts throughout the irrigation season, irrigating approximately 165 days a year. During dry years, the GID diversion season can be curtailed as early as July.

Within the past 10-15 years, GID operated between 135-140 (138 average) days a year through the irrigation season (4/1 - 9/30) with an average maximum diversion volume of approximately 28-32 cfs or 8,200-acre feet a year. GID diversion volumes are usually reduced or turned off during base flow conditions in August due to the low priority of the water right. GID typically will be allowed to divert again later in September when higher priority rights reduce their diversion volume.

When GID is irrigating, diverted water runs through a compliant fish screen situated on the edge of the Shasta River to a series of pumps where the water is lifted approximately 60 feet and is discharged into an earthen ditch. Transmission loss during conveyance through the ditch can be significant. Efficiency values are dependent on volume of water diverted and quality of ditch maintenance. Higher diversion volumes and excessive aquatic vegetation in the ditch result in increased transmission losses. Transmission losses as high as 35% can occur in the main canal when diverting at high levels. During a study in 2006, average ditch loss values were 17% over the study period and approximately 1,100-acre feet was lost in delivery transmission. Because much of the loss is along the toe of volcanic hillocks, transmission loss is expected to transition to deep percolation.

The Grenada Irrigation District Flow Enhancement project (Project) will replace the existing earthen ditch with a buried pipeline, from GID's existing diversion pump station from the Shasta River to GID's on-district pump station near Pumphouse Road west of Old Highway 99. The pipeline will be aligned to deliver water directly to GID (approximately 3.4 miles of pipeline) rather than following the existing contouring ditch alignment (approximately 5.3 miles). The pipeline will be constructed to carry a maximum water flow of 24 cfs. A controller would be programmed to limit the maximum volume diverted per the developed schedule. The diversion data will be provided publicly on California Data Exchange Center (CDEC). A gauge will be installed in the Shasta River at the proposed downstream extent intended to verify dedicated flow.

The Project will implement a priority recovery action identified in the SONCC Coho Salmon Recovery Plan (SONCC-ShaR.3.1.4.1), by improving the GID ditch diversion to increase instream flows and decrease impacts to SONCC coho salmon. Over the past five years, GID has worked with CDFW and NOAA to develop a Safe Harbor Agreement (SHA) to promote conservation and recovery of SONCC coho salmon. As a result, GID agreed to reduce its maximum diversion volume from 40 cfs to 24 cfs following construction of the new pipeline. GID also committed to delay starting diversion until April 10th rather than April 1st, and committed that its maximum diversion volume after September 7th to be 18 cfs, or less. The diversion schedule results in a reduction in diversion over historical use that benefits coho life stages, specifically spring smolt out-migration and spring 0+ juvenile redistribution. Reduced diversions after September 7th will contribute to fall flow enhancement efforts.

Diversion Volume Schedule – Normal and Drier Years

Date	Life Stage	Maximum Diversion Rate (cfs)	Current (cfs)	Proposed (cfs)	Conserved (Acre Feet)
4/1 – 4/9	Juvenile	40	30	0	535
4/10 – 5/20	Juvenile	40	30	24	464
5/21 – 8/15	Over-summering	40	24	24*	0
8/16 – 9/6	Over-summering	40	0-15	0-15*	0
9/7 – 9/30	Over-summering	40	21	18*	137
<i>Average Annual Volume Conserved</i>					<i>1,136</i>

Diversion Volume Schedule – Wet Years

Date	Life Stage	Maximum Diversion Rate (cfs)	Current (cfs)	Proposed (cfs)	Conserved (Acre Feet)
4/1 – 4/9	Juvenile	40	30	0	535
4/10 – 5/20	Juvenile	40	30	24	464
5/21 – 8/15	Over-summering	40	24	24*	0
8/16 – 9/6	Over-summering	40	24	24*	0
9/7 – 9/30	Over-summering	40	24	18*	274
<i>Average Annual Volume Conserved</i>					<i>1,273</i>

* Commitment to the diversion schedules is not inter-related with curtailment resulting from GID’s low priority within the Shasta Decree. Maximum diversion schedule will be adhered to when curtailment is not enacted. Diversion for irrigation will be curtailed or turned off by direction of Watermaster.

The planning phase for this Project was supported by a WCB SFEP grant to the National Fish and Wildlife Foundation. In addition, the effort to secure an instream dedication of the conserved water pursuant to California Water Code Section 1701/1707 is currently underway through a WCB SFEP grant to The Nature Conservancy.

MANAGEMENT OBJECTIVES AND NEEDS

GID is a participant in the Shasta Watershed Conservation Group (SWCG) SHA. The agreement has a 20-year term and requires GID to abide by the diversion reduction schedule. It also requires continued monitoring and reporting of diverted water and instream dedication. GID also intends to enter into a forbearance agreement with SWCG and the Scott Shasta Watermaster District. The agreement will require that, regardless of priority, SWCG participants agree to bypass water conserved upstream by other participants. When all higher priority rights located downstream of GID are fully met, any reduction in diversion by GID results in additional water remaining in the stream that will flow past the higher priority diversions that were previously operating at maximum capacity. If at any time during the 20-year life of the Project, GID does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of

California an amortized amount of funds based on the number of years left on the project life.

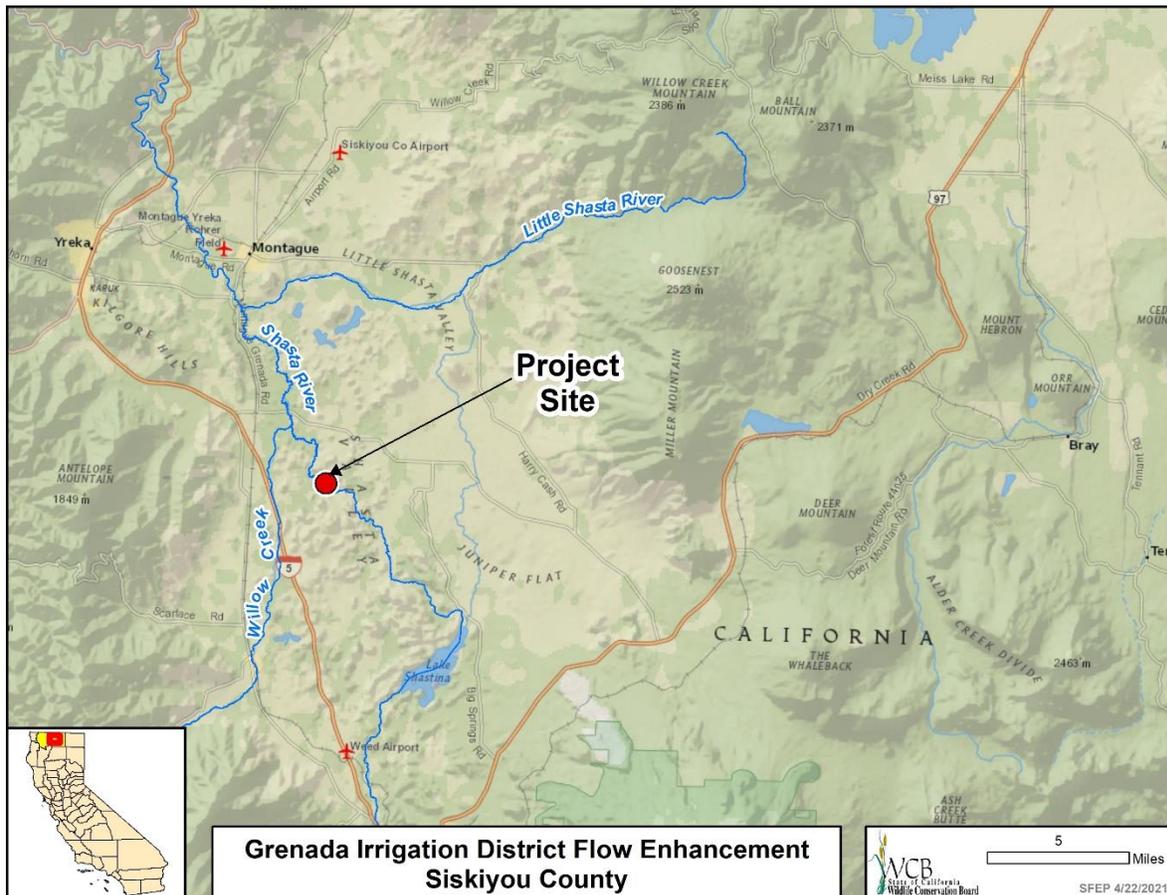
PROJECT FUNDING

Partners	Amount
WCB	\$6,301,115
Other	\$0
Total	\$6,301,115

Project costs will be for project management, construction, and monitoring.

CEQA REVIEW AND ANALYSIS

Grenada Irrigation District, as lead agency, prepared a Mitigated Negative Declaration (MND) for the Project pursuant to the provisions of CEQA. Staff considered the MND and has prepared proposed written findings documenting WCB’s compliance with CEQA. Subject to approval of this proposal by WCB, the appropriate Notice of Determination (NOD) will be filed with the State Clearinghouse.



25. Water Management Plan for Utilization of Humboldt County Contract Water

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$574,980 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Water Management Plan for Utilization of Humboldt County Contract Water
Project Type:	Planning
Applicant/Grantee:	Humboldt County
Amount Recommended:	\$574,980
Funding Partners:	N/A
Landowner(s):	Multiple
County:	Trinity, Humboldt, and Del Norte
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Water Management Plan for Utilization of Humboldt County Contract Water (Project) involves planning activities to support the release of water from the Trinity River Division of the Central Valley Project for instream uses to benefit fisheries in the Trinity River and lower Klamath River. The project area includes the Trinity River, from Lewiston Dam to its confluence with the Klamath River, and the Klamath River, from the Trinity River confluence to the Pacific Ocean, encompassing portions of Trinity, Humboldt, and Del Norte counties.

PROJECT DESCRIPTION

The Trinity River supports fall- and spring-run Chinook salmon; coho salmon; summer-, fall- and winter-run steelhead trout; green sturgeon; and Pacific lamprey. While fall-run Chinook salmon are the dominant species/race and the focus of dependent Tribal, sport, and commercial fisheries, several of these fishes are at critically low levels where they are listed or considered for listing under California and Federal Endangered Species Acts.

Through the 1955 Trinity River Division Act (1955 Act), Congress authorized the Trinity River Division as an integrated component of the Central Valley Project to increase water supplies for irrigation and other beneficial uses in the Central Valley. Section 2 of the 1955 Act, however, included two provisos that limit that integration. Proviso 1 directed the Secretary to ensure the preservation and propagation of fish and wildlife through the adoption of appropriate measures, including certain minimum flows then deemed necessary in the Trinity River for the fishery. Proviso 2 specified that “not less than 50,000 acre-feet shall be released

annually from the Trinity Reservoir and made available to Humboldt County and downstream water users.”

In recognition of Proviso 2, a similar distinct condition was included in a 1959 water delivery contract between the Bureau of Reclamation and Humboldt County, as well as the Bureau of Reclamation’s water permits from the State of California. However, the Bureau of Reclamation historically asserted a view that Proviso 2 should be read in conjunction with Proviso 1 and not as a separate release requirement.

The 2000 Record of Decision established the Trinity River Restoration Program and, among other actions, adopted a variable annual instream flow regime for the mainstem Trinity River below the Trinity River Division, based on annual forecasted hydrology for the basin, ranging from 369,000 acre-feet in critically dry years to 815,000 acre-feet in extremely wet years.

In 2014, the Department of Interior Solicitor issued a memorandum that concluded that the two provisos represent separate and independent limitations on the Trinity River Division’s integration with, and thus diversion of water to, the Central Valley Project, and recommended that "Reclamation conduct an appropriate level of analysis in response to a request for a release of water under Proviso 2 to determine the potential uses to which this water might be put, any other applicable legal requirements that must be addressed prior to releasing said water, whether existing operations or other authorities can fulfill the pending request, and then determine what additional actions may be appropriate under the circumstances." The need for this project is created by the legal and compliance steps that must be completed for the Bureau of Reclamation to release the Proviso 2 water (Contract Water).

The Project will develop a Water Management Plan with associated technical analysis and modeling to support utilization of Humboldt County’s water contract with the Bureau of Reclamation for annual releases of not less than 50,000 acre-feet into the Trinity River to benefit fish and wildlife in the Trinity River and lower Klamath River. The Water Management Plan will guide annual decision-making on flow releases over a 25-year planning period for beneficial uses and define the proposed action for future environmental review and consultation, as applicable. These releases would be in addition to the volumes released by the Trinity River Restoration Program.

Project goals include:

- Addressing missing elements of the natural flow regime,
- Enhancing habitat quality for fish and wildlife,
- Improving ecosystem health and resilience,
- Increasing opportunities for ocean and river salmon fishing, and
- Providing water for water quality enhancement.

Examples of potential uses for the water include augmentation of winter flows to increase salmonid rearing habitat and increase geomorphic flows to promote creation and maintenance of riverine habitats in Upper Trinity River. In addition, the feasibility of using the water to increase the cold-water pool in Trinity Reservoir to ensure sufficient quantity of cold water for release into the Trinity River to support juvenile and adult salmonids will be explored. Project activities are designed to achieve the following objectives:

- Understand the potential non-consumptive, beneficial uses for the Contract Water within the Trinity River and lower Klamath River and identify needs and priorities.
- Identify and evaluate a range of water management and climate scenarios for the Trinity River Division of the Central Valley Project over the 25-year planning period.
- Perform hydrologic analysis to develop expected flow schedules and hydrographs for the Trinity and Sacramento rivers.
- Perform fish habitat and fish production modeling to optimize the benefits from Contract Water releases for fisheries on the Trinity River and lower Klamath River.
- Explore approaches to minimize impacts associated with water deliveries to the Sacramento River as a result of Contract Water releases into the Trinity River.
- Create a Water Management Plan that provides a structure and process for annual decision-making and identifies the anticipated uses of Contract Water over the 25-year planning period.
- Coordinate with the Bureau of Reclamation and SWRCB regarding potential water right changes.
- Conduct preliminary scoping and develop a strategy for compliance with CEQA, NEPA, and other elements of environmental compliance that is ready to implement.

Completion of the Water Management Plan is the first step in the process of making the Contract Water available for release for the optimal benefit of the fishery resources in the Trinity River and lower Klamath River.

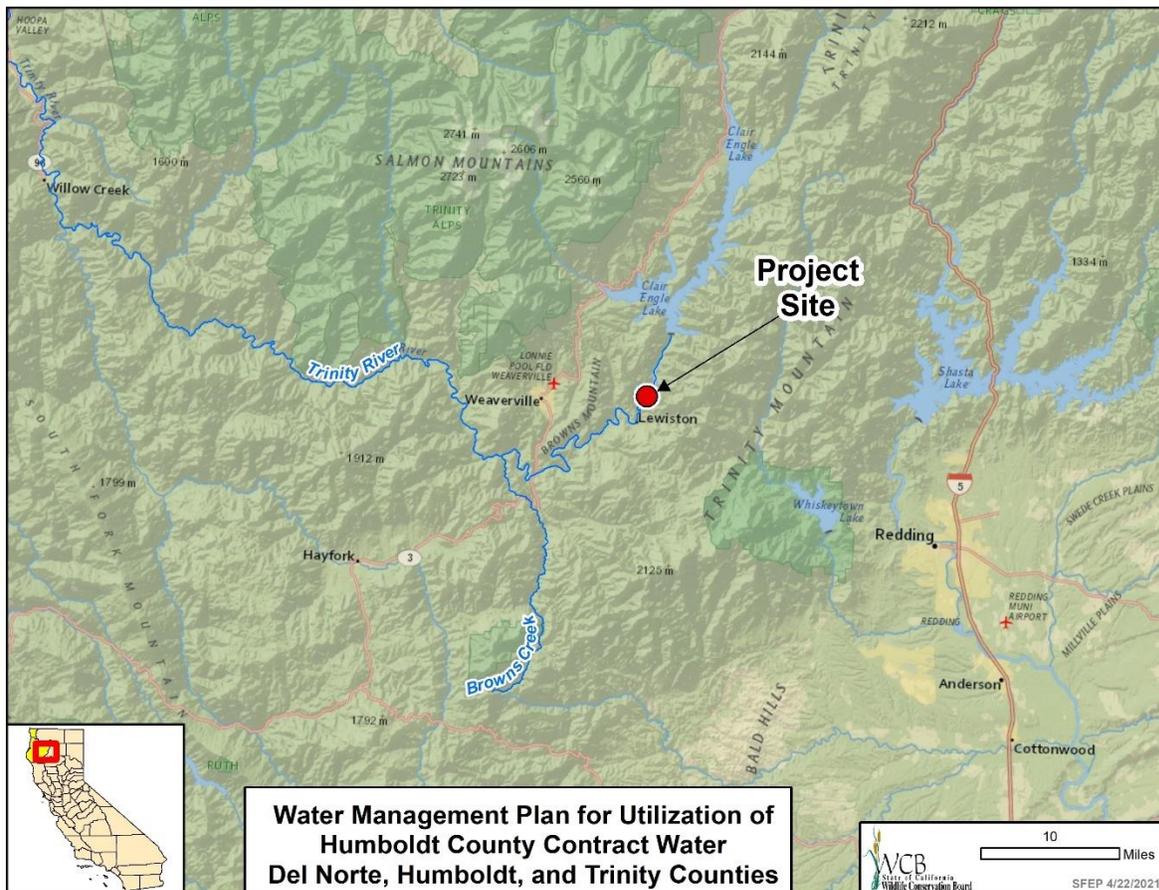
PROJECT FUNDING

Partners	Amount
WCB	\$574,980
Other	\$0
Total	\$574,980

Project costs will be for project management, stakeholder engagement, technical analysis and modeling, development of a Water Management Plan, evaluating potential water right changes, and developing a strategy for environmental compliance.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



26. North Fork Lost River Flow and Habitat Enhancement

STAFF RECOMMENDATION

Staff recommends that WCB adopt the written findings and approve this project as proposed; allocate \$2,065,410 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	North Fork Lost River Flow and Habitat Enhancement
Project Type:	Implementation
Applicant/Grantee:	Sanctuary Forest, Inc.
Amount Recommended:	\$2,065,410
Funding Partners:	Sanctuary Forest, Inc., California Conservation Corps, Lost Coast Forestlands LLC, Bella Vista Foundation
Landowner(s):	Lost Coast Forestlands LLC, Sanctuary Forest, Inc.
County:	Mendocino
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The North Fork Lost River Flow and Habitat Enhancement (Project) site is on a forested reach of the North Fork Lost River, a tributary to the Mattole River headwaters in Mendocino County. The Lost River watershed is located about 21 miles southwest of Garberville and Highway 101. The entire watershed is conserved and there are no human water diversions in Lost River.

PROJECT DESCRIPTION

Historically, Lost River has supported abundant native runs of coho salmon, Chinook salmon, and steelhead trout populations. Its low gradient, cool water refugia potential and documented coho presence in recent years have made it a priority in the Mattole headwaters for coho recovery. It is currently able to support spawning and rearing in normal years. In drought years however, summer stream flows are insufficient to support rearing, and thousands of juvenile salmonids perish as pools become disconnected and dry up. In 2015 and 2018 juvenile coho were rescued from Lost River. Within most of Lost River and the Project reach, limiting factors include channel entrenchment, loss of floodplain connectivity, reduced groundwater storage, low summer flows, and lack of pool habitat.

The Project will restore geomorphic, hydrologic, and ecological processes to about 5,200 feet of Lost River in order to address these key limiting factors. The Project has three primary objectives which are intended to recover stream habitat essential to salmonid production: stream flow enhancement, instream and floodplain habitat enhancement, and fish passage improvements. Stream flow benefits will be achieved through installation of instream channel-spanning structures with

subsurface clay restrictive layers and incorporation of a modified Stage 0 approach. Two terrace ponds will be constructed to provide metered flow into the project reach during the lowest flow period between August and October. Channel entrenchment and disconnected floodplains will be reduced and partially eliminated in the reaches designed with channel spanning structures totaling about 3,055 linear feet. In addition to wet season flow retention and associated dry-season stream flow benefits, the Project will enhance instream and floodplain habitat by raising the stream bed to engage with the floodplain, increasing pool depth, and adding instream habitat complexity through wood placement. The Project is designed to restore natural processes over the long-term, promoting the formation of a complex meandering stream and wetlands. Two undersized culverts will be upgraded as needed to facilitate changes in streambed elevation resulting from the stream flow enhancement structures. This will provide a secondary benefit to fish passage. Designs and CEQA compliance for this Project were completed through a planning project for the Mattole headwaters supported by a WCB SFEP grant.

MANAGEMENT OBJECTIVES AND NEEDS

Sanctuary Forest, Inc. has adopted a Management Plan that guides management actions for the property. If at any time during the 20-year life of the Project, Sanctuary Forest, Inc. does not manage and maintain the Project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

Partners	Amount
WCB	\$2,065,410
Other	\$49,931
Total	\$2,115,341

Project costs will be for project management and permitting, implementation of the restoration designs, revegetation, post-project monitoring and adaptive management.

Other secured funding sources include Sanctuary Forest, Inc. (in-kind volunteer hours), California Conservation Corps, Lost Coast Forestlands LLC, and Bella Vista Foundation.

CEQA REVIEW AND ANALYSIS

Humboldt County, as lead agency, prepared an MND for the project pursuant to the provisions of CEQA. Staff considered the MND and has prepared proposed, written findings documenting WCB's compliance with CEQA. Subject to approval of this proposal by WCB, the appropriate NOD will be filed with the State Clearinghouse.



27. Navarro River and Outlet Creek Flow Enhancement Planning

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$1,312,640 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Navarro River and Outlet Creek Flow Enhancement Planning
Project Type:	Planning
Applicant/Grantee:	Mendocino County Resource Conservation District
Amount Recommended:	\$1,312,640
Funding Partners:	Mendocino County Resource Conservation District, The Nature Conservancy, and Trout Unlimited
Landowner(s):	Multiple
County:	Mendocino
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Navarro River and Outlet Creek Flow Enhancement Planning project (Project) will work with landowners to conduct planning activities to support efforts to enhance stream flows in the Navarro River and Outlet Creek watersheds in Mendocino County. The Navarro River watershed is the largest coastal basin in Mendocino County, encompassing approximately 315 square miles. The Navarro River flows northwest through the Coastal Range, reaching the Pacific Ocean about 2 miles south of the town of Albion. Within the Navarro River watershed, project related activities will occur within Mill Creek, North Fork Navarro (including tributaries such as Flynn Creek, Soda Creek, and Neefus Gulch), and Navarro River mainstem. Outlet Creek is a tributary to the Eel River, draining a watershed of approximately 158 square miles. It flows northeasterly, from near the vicinity of Willits, entering the Eel River about 7 miles northeast of Longvale (intersection of U.S. Route 101 and State Route 162). Within the Outlet Creek watershed, project related activities will occur within Outlet Creek mainstem, Davis Creek, Berry Creek, Ryan Creek, Broaddus Creek, and Baechtel Creek.

PROJECT DESCRIPTION

Due to California's Mediterranean climate, most rainfall and snow occur in the winter followed by long dry seasons. As a result, many of California's rivers and streams experience critically low flows or even dry up during late dry season months. Increased frequency of droughts and rising temperatures due to climate change further exacerbate the situation. These impaired stream flow conditions threaten the health of our streams and survival of salmon and steelhead as well as other fish and wildlife. Impaired stream flows also reduce water supply reliability for farms and communities that depend on streams to meet their water needs.

The Navarro River watershed supports many listed species including Central California coast coho salmon and Northern California steelhead trout. Outlet Creek supports the listed SONCC coho salmon, California coast Chinook salmon, and Northern California steelhead trout. NMFS recovery plans for these fish identify low dry season stream flow as a major limiting factor for species recovery in both watersheds and call for the development and implementation of stream flow enhancement work to reduce dry season diversions and increase dry season flows.

California's rural watersheds need a collaborative portfolio of flow enhancement strategies and techniques that foster collaboration among water diverters, support habitat needs for fish and wildlife, and improve water security for communities. Examples of potential approaches include storage and forbearance, groundwater infiltration, large wood augmentation, coordinated water diversion, flow augmentation, and Community Water Management.

This planning project will further successful strategies, projects and management practices that have been developed in the Navarro River and Outlet Creek watersheds with previous WCB SFEP support (e.g., 2016 and 2018 grants to the Mendocino County Resource Conservation District and 2017 grant to TU). The overarching goal of the Project is to increase stream flow and improve instream habitat conditions in the Navarro River and Outlet Creek watersheds to support the recovery of listed salmonids. To reach this goal, the Project will conduct planning activities to support a diverse array of projects designed to change the amount, timing and/or quality of the water flowing in streams of the Navarro and Outlet watersheds.

Navarro River Watershed

Mill Creek Projects

- Institute the Mill Creek Community Water Management Plan with current partners and new landowners in the watershed to garner greater participation and support development of projects and management actions to improve stream flows and water supply reliability.
- Develop from 30% to a minimum of 65% planning designs on three flow enhancement projects identified as part of the Mill Creek Community Water Management plan development process (WCB SFEP grant [2018] to Mendocino County Resource Conservation District).
- Expand the Mill Creek Coordinated Diversion Management project to include an additional 4-6 willing landowners and a greater extent of the mainstem of Mill Creek (more than 4 river miles) and potentially lower tributaries for two successive dry seasons; a summary report will document the coordination plan and monitoring results.

- Identify and develop two new flow enhancement storage and/or infiltration projects in Mill Creek watershed to 30% design level.
- Develop one large wood project in the Mill Creek watershed to minimum of 65% design.
- Conduct a feasibility assessment that evaluates the viability of using storage ponds within the Mill Creek watershed to augment stream flow in the dry season to support the survival of juvenile salmonids through flow releases.

North Fork Navarro Projects

- Develop a Community Water Management Plan for stream flow enhancement in the North Fork Navarro watershed in collaboration with the community of Rancho Navarro, the town of Navarro, and landowners living along Flynn Creek. This effort will build upon the work developed for the Mill Creek plan and will include landowner outreach to raise awareness of stream flow issues; development of impaired flow analyses for ungauged reaches; and development of restoration flow objectives using the California Environmental Flow Framework methodology, to enable development of and assess the effectiveness of stream flow enhancement projects.
- Identify and develop three new flow enhancement projects to 30% design level.
- Develop one large wood project in the North Fork Navarro watershed to a minimum of 65% designs.

Mainstem Navarro Projects

- Develop and pilot dry season coordinated water diversion management on the mainstem Navarro River, for at least one season, to reduce the cumulative impacts of diversions and improve dry season stream flow.

Outlet Creek Watershed

Prepare a Flow Release Feasibility Study that includes the following activities:

- Conduct outreach and initial negotiations with owners of reservoirs whose sizes and locations make them well suited for potential flow augmentation. Evaluate willingness of those owners to participate in voluntary flow releases and accompanying water transactions to benefit instream resources.
- Identify highest priority downstream reaches to benefit from potential flow releases, and optimal timing and duration of releases.
- Work with relevant agencies regarding potential constraints and pathways to secure necessary permits and approvals for flow releases.

- Based on the results of initial outreach, negotiate specific terms of flow release transactions with willing landowners, with a goal of developing at least one flow release project to the stage where it can be pilot tested to demonstrate feasibility and effectiveness. Any pilot testing of flow releases will be conducted with separate implementation funding and all necessary approvals.

In addition, the Project will continue implementing a complimentary monitoring program, including stream flow gauging, water quality monitoring, and wet-dry mapping, in project reaches to evaluate stream flow conditions and stream responses to flow enhancement projects.

PROJECT FUNDING

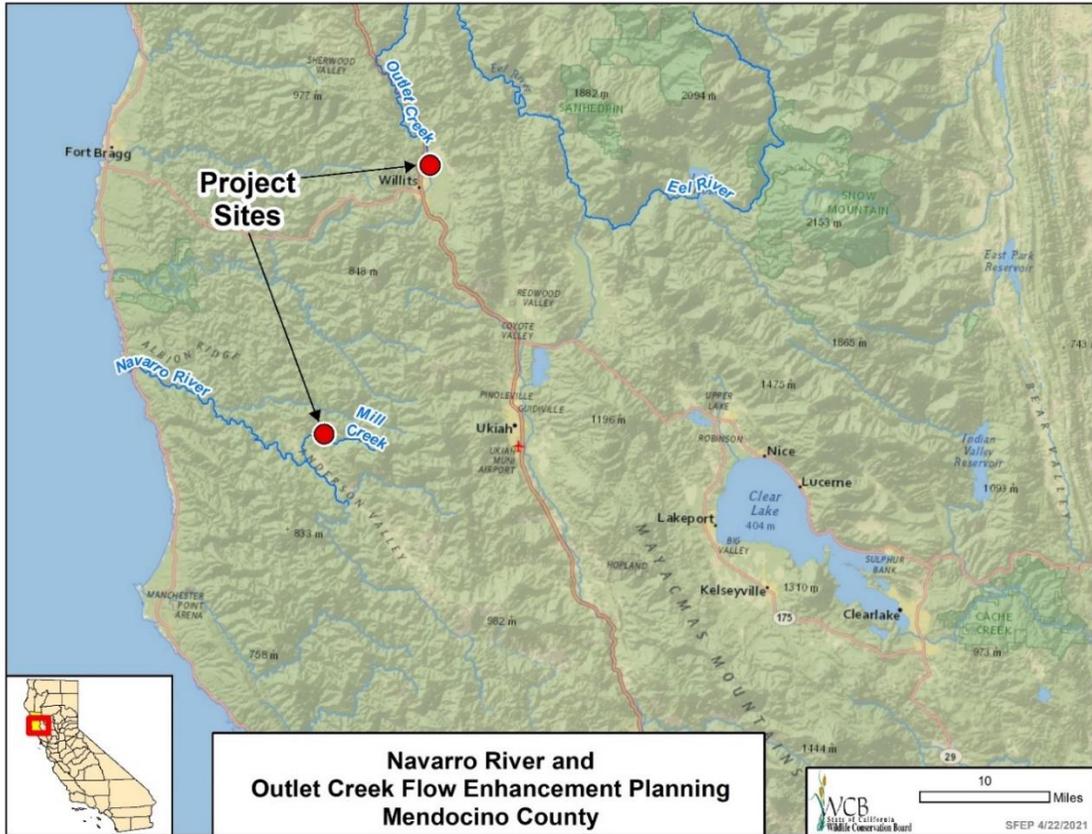
Partners	Amount
WCB	\$1,312,640
Other	\$227,113
Total	\$1,539,753

Project costs will be for project management; flow enhancement planning in the Navarro River and Outlet Creek watersheds; and stream flow, water quality, and wetted habitat monitoring and assessment.

Other secured funding sources include Mendocino County Resource Conservation District, The Nature Conservancy, and TU.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only feasibility and planning studies for possible future actions. In addition, the Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15304, Class 4, Minor Alterations to Land, as a minor alteration to water; and Section 15306, Class 6, Information Collection, as basic data collection, research, and resource evaluation activities that do not result in serious or major disturbance to an environmental resource. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



28. Deer Creek Instream Flow Planning and Design

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$1,642,594 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Deer Creek Instream Flow Planning and Design
Project Type:	Planning
Applicant/Grantee:	Trout Unlimited
Amount Recommended:	\$1,642,594
Funding Partners:	Trout Unlimited, The Nature Conservancy, and Landowners
Landowner(s):	Deer Creek Irrigation District, Stanford-Vina Ranch Irrigation Company, The Nature Conservancy, and private
County:	Tehama
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Deer Creek Instream Flow Planning and Design (Project) focus area spans the lowest 11 miles of Deer Creek, from the Deer Creek Irrigation District (DCID) headgate to its confluence with the Sacramento River near the town of Vina. The lower Deer Creek watershed is situated southeast of Red Bluff and northwest of Chico and passes under Highway 99 before joining with the Sacramento River.

PROJECT DESCRIPTION

Deer Creek flows for 75 miles from the snowfields of Mount Lassen to its confluence with the Sacramento River. The cool waters of the upper and middle reaches support Central Valley spring run Chinook salmon, Central Valley steelhead trout, fall run Chinook salmon, and numerous other native fish species. The primary land use in the lower watershed is agriculture, and stream flow is affected by three irrigation diversions. The DCID diversion, which may legally divert approximately 33% of the creek's flow, is located 11 miles upstream of the Sacramento River confluence. The Stanford-Vina Ranch Irrigation Company (SVRIC) diversion is located 5 miles upstream of the confluence, and may take approximately 64% of the flow. About midway between these two districts is the smaller Cone-Kimball diversion, which serves users having rights to the remaining 3% of the flow.

Recent efforts have addressed fish passage issues at the DCID diversion, and the SVRIC diversion is undergoing design and permitting to increase fish passage and improve screening. The Project will build on these diversion improvements and

develop specific voluntary infrastructure measures to reduce existing water diversions from Deer Creek. The objectives of this planning Project are to:

- Produce a 65% design, permits, and management plan for a groundwater substitution project that will reduce diversion from Deer Creek to the Sheep Camp Ditch by 1-3 cfs, on either a seasonal or permanent basis.
- Produce a 65% design, permits, and management plan for a groundwater substitution project that will reduce diversion from Deer Creek to the Cone-Kimball Ditch by 1-5 cfs, on either a seasonal or permanent basis.
- Produce a reconnaissance-level report identifying specific opportunities for water savings in the SVRIC and DCID systems, including on-farm efficiency, conveyance efficiency, and groundwater recharge.
- Produce an Integrated Water Management Plan for meeting flow targets in Deer Creek by managing the water savings from the above projects, together with the savings from concurrent and future projects, and conjunctively managing groundwater as needed to ensure sustainability.

This Project is a component of a larger strategy for meeting stream flow targets being pursued by TU and The Nature Conservancy, in coordination with CDFW and the Irrigation Districts. Previous and ongoing projects include: the Deer Creek Groundwater Exchange, which established the feasibility of seasonal groundwater substitution; Deer Creek Hydrological and Technical Studies, which will produce a reconnaissance-level model and assess the effects of groundwater pumping on the Deer Creek aquifer; pursuit of a long-term water right lease with DCID; and automation of DCID's main diversion, which is being presented concurrently with this Project.

PROJECT FUNDING

Partners	Amount
WCB	\$1,642,594
Other	\$320,789
Total	\$1,963,383

Project costs will be for feasibility studies, design development, and development of an Integrated Water Management Plan.

Other secured funding sources include TU, The Nature Conservancy, DCID, Stanford-Vina Ranch Irrigation Company and private landowners.

CEQA REVIEW AND ANALYSIS

The Project is statutorily exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, Feasibility and Planning Studies, as it involves only

feasibility and planning studies for possible future actions. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



29. Upper Lacey Meadow Restoration

STAFF RECOMMENDATION

Staff recommends that WCB adopt the written findings and approve this project as proposed; allocate \$1,743,458 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Upper Lacey Meadow Restoration
Project Type:	Implementation
Applicant/Grantee:	Truckee River Watershed Council
Amount Recommended:	\$1,743,458
Funding Partners:	Truckee River Watershed Council
Landowner(s):	Truckee Donner Land Trust and U.S. Forest Service
County:	Sierra and Nevada
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Upper Lacey Meadow Restoration project (Project) is located approximately 2 miles upstream from Weber Lake, 14 miles southwest of Sierraville. The Project site is primarily within Sierra County, with a small portion within Nevada County. Upper Lacey Meadow occurs on contiguous parcels owned by the Truckee Donner Land Trust and the U.S. Forest Service (USFS). In 2010, WCB contributed \$5,010,000 to the acquisition of fee title for Weber Lake/Lacey Meadows, and subsequently in 2019, the WCB Climate Adaptation and Resilience Program contributed \$293,000 to the planning work to support restoration of Lacey Meadows enabling implementation of the Project.

PROJECT DESCRIPTION

The Project is designed to restore hydrologic function to about 100 acres of meadow habitat, benefiting stream flow, supporting resilience to climate change, and improving habitat for numerous wildlife species. Lacey Creek is incised through Lacey Meadow due to past and present human activities. Road building, logging, grazing, and recreation impacts have contributed to the degradation. At present, groundwater levels are up to nine feet below the ground surface during the growing season, which does not provide support to meadow species. The incised channel, the primary flow related limiting factor in this system, appears to act as a drain on the surrounding shallow groundwater table.

The primary stream flow enhancement expected from this project is improvement in late season base flow. Additional benefits include improved water quality, increased resilience to climate change, and restored habitat for several special status species including willow flycatcher.

The Project will implement meadow restoration techniques designed to improve floodplain connectivity and increase groundwater storage and late season stream flow by:

- Restoring natural flow paths and hydrologic function through channel relocation and fill
- Construction of engineered riffles
- Promoting stream channel aggradation with instream log and boulder structures
- Restoring approximately 27 acres of native meadow vegetation
- Reducing in-channel erosion
- Road related design improvements
- Implement grazing practices that protect restoration work and maintain ecological function of meadows and streams

The Project meets several solicitation priorities including restoring ecologically functional flows, providing climate change resiliency to an at-risk meadow, restoring a wet meadow, restoring flood flows to floodplains, coordinating with adjacent forest thinning activities, improving habitat for several special status species, and includes stream gaging to quantify benefits.

MANAGEMENT OBJECTIVES AND NEEDS

The Truckee River Watershed Council has adopted a Management Plan that guides management actions for the property, including management of the property. If at any time during the 20-year life of the Project, Truckee River Watershed Council does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

Partners	Amount
WCB	\$1,743,458
Other	\$12,200
Total	\$1,755,658

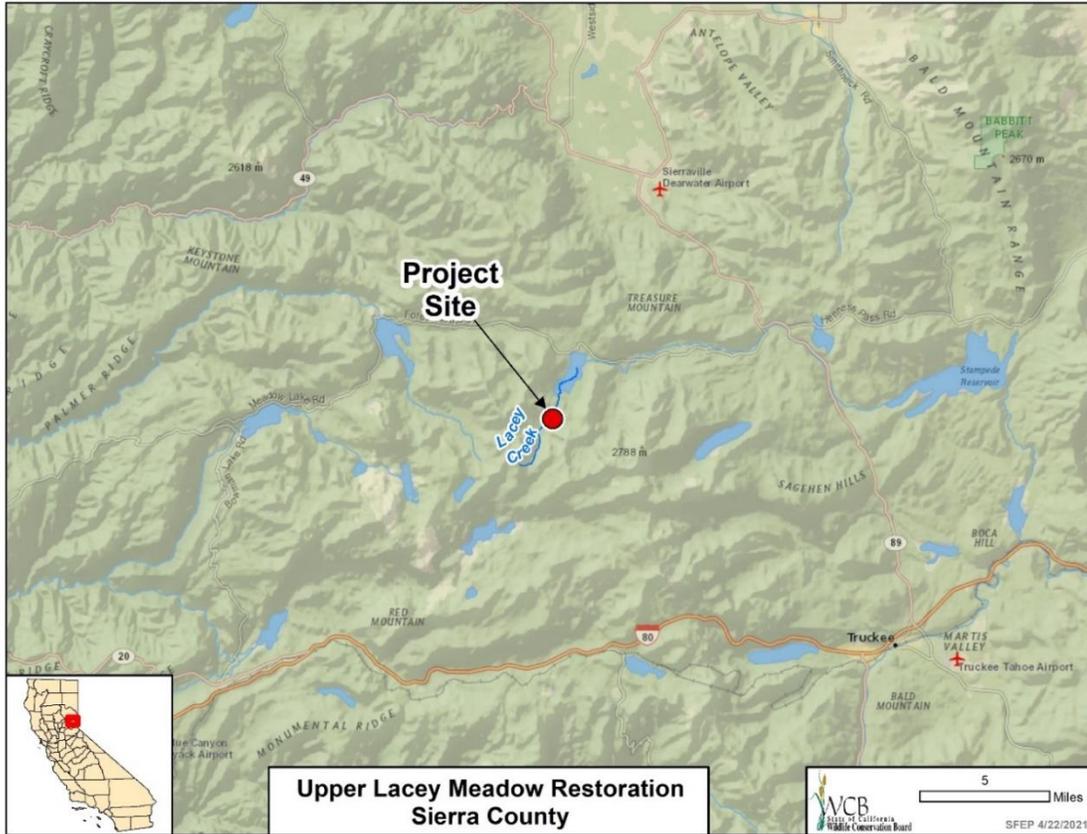
Project costs will be for project construction, monitoring, outreach and stakeholder coordination, and project management.

Other secured funding sources include the Truckee River Watershed Council.

CEQA REVIEW AND ANALYSIS

The Lahontan Regional Water Quality Control Board, as lead agency, prepared a MND for the project pursuant to the provisions of CEQA. Staff considered the MND and has prepared proposed, written findings documenting WCB's compliance with

CEQA. Subject to approval of this proposal by WCB, the appropriate NOD will be filed with the State Clearinghouse.



30. Hallwood Side Channel and Floodplain Restoration, Phases III and IV

STAFF RECOMMENDATION

Staff recommends that WCB adopt the written findings and approve this project as proposed; allocate \$1,985,000 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Hallwood Side Channel and Floodplain Restoration, Phases III and IV
Project Type:	Implementation
Applicant/Grantee:	Yuba Water Agency
Amount Recommended:	\$1,985,000
Funding Partners:	Teichert Aggregates, Yuba Water Agency, U.S. Fish and Wildlife Service
Landowner(s):	Teichert & Sons, Western Aggregates LLC
County:	Yuba
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The Hallwood Side Channel and Floodplain Restoration, Phases III and IV project (Project) occurs on two private aggregate mining operations north of, and contiguous with, the Yuba River eight miles northeast of Marysville in Yuba County.

PROJECT DESCRIPTION

Historically, the lower Yuba River had a meandering to braided channel with extensive floodplain areas and riparian vegetation. The lower Yuba River ecosystem has been affected by European-American activities for more than a century, beginning with extensive gold mining in the 1850s. Since that time, riparian and instream habitats have been modified or converted for uses such as agriculture, gravel and gold mining, water impoundments, increased water diversions, decreased instream flows, and levees. These major impacts have led to the deterioration of riparian and aquatic habitat conditions.

In the Project area, the Yuba River is currently constrained by training walls composed of dredger tailings, which were constructed in the early 1900's by hydraulic dredges following the Gold Rush. The area was subsequently dredged multiple times, creating significant impacts for the natural flow of the river and the floodplain. A large training wall in the middle of the river, known as the Middle Training Wall, runs more than two miles along the length of the Project site and confines the channel to a specific width, preventing the river from accessing historic floodplain areas.

The Project's goal is to restore and enhance ecosystem processes with a primary objective of rehabilitating productive juvenile salmonid rearing habitat to increase

natural production of fall-run and spring-run Chinook salmon and California Central Valley (CCV) steelhead trout in the lower Yuba River. Despite extensive habitat degradation, Chinook salmon and CCV steelhead trout populations are still present in the lower reaches of the Yuba River below Englebright Dam. The Project will enhance stream flow by reconnecting flood flows with restored floodplains across a range of ecologically functional flows as well as higher flood flows. Floodplain surfaces will be lowered to elevations that inundate more frequently, increasing lateral connectivity and the frequency and duration of inundation during the January to June rearing period for target species. The Project will also provide flood risk reduction benefits to the vicinity by reducing flow velocities, water surface elevations, and scour potential to the remaining training walls and other infrastructure during large flood events.

The core activity of the Project is the removal of large portions of the Middle Training Wall to create a healthier, more natural and, therefore, more productive river with subsequent fine-scale grading and revegetation.

Specific components of the implementation include:

- Rough grading to remove Middle Training Wall
- Fine grading to create off-channel areas
- Riparian revegetation
- Construction and biological monitoring
- Post-project monitoring

MANAGEMENT OBJECTIVES AND NEEDS

The Project is designed to restore natural river processes and floodplain lateral connectivity by removing unnatural constraints, such as the Middle Training Wall. Following implementation, it is anticipated that the site will evolve over time into a more heterogeneous landscape suited to the Lower Yuba River flow and sediment conditions. The landowners will enter into an agreement with Yuba Water Agency (YWA) to establish adequate land tenure and site control to implement, manage, and monitor the Project. This will include a provision to authorize right of access to the site for a period of at least 20 years. If at any time during the 20-year life of the Project, YWA does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

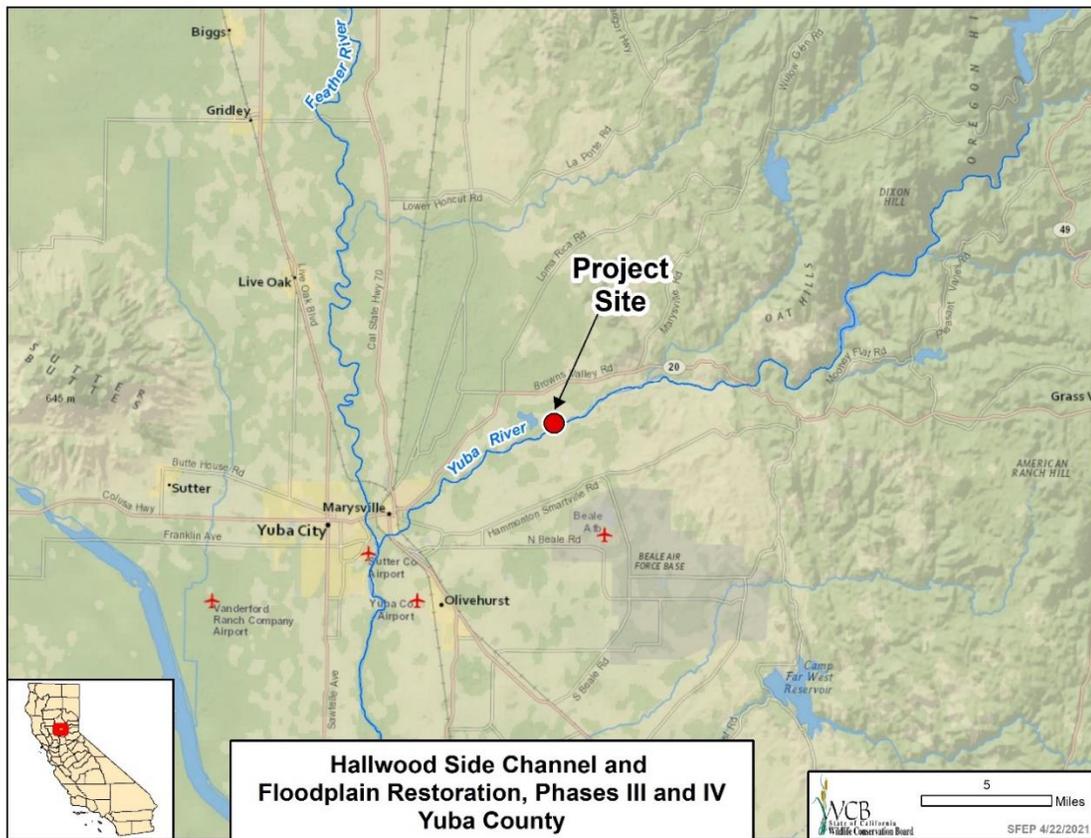
Partners	Amount
WCB	\$1,985,000
Other	\$26,180,000
Total	\$28,165,000

Project costs will be for construction, revegetation, monitoring, and project management.

Other secured funding sources include Teichert Aggregates, YWA, and USFWS.

CEQA REVIEW AND ANALYSIS

Yuba County, as lead agency, prepared a MND for the Project pursuant to the provisions of CEQA. Staff considered the MND and has prepared proposed written findings documenting WCB's compliance with CEQA. Subject to approval of this proposal by WCB, the appropriate NOD will be filed with the State Clearinghouse.



31. Trapper Forest Health Restoration

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$3,626,560 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Trapper Forest Health Restoration
Project Type:	Implementation
Applicant/Grantee:	National Forest Foundation
Amount Recommended:	\$3,626,560
Funding Partners:	U.S. Forest Service and Blue Forest
Landowner(s):	U.S. Forest Service
County:	Sierra and Yuba
Strategic Plan	Goals: A1, A.2, B.1 Objectives: SI 1.6, 2.3, 4.1
Disadvantaged Community:	Within a disadvantaged community

LOCATION

The Trapper Forest Health Restoration project (Project) is comprised of approximately 1,308 acres situated on public lands in the Tahoe National Forest (TNF), in Sierra and Yuba counties. The center of the Project area is located approximately five miles northeast of Camptonville. Project activities will occur in the sub-basins of Oregon Creek, Cherokee Creek, and Grizzly Creek, in the Yuba River watershed.

PROJECT DESCRIPTION

Many of the trees within the Project area were cut approximately 170 years ago during the gold rush to provide lumber for mines and surrounding communities. This has caused the Project area to exhibit a uniform-aged-second-growth forest that lacks the structural diversity (e.g., very large trees, large snags, and forest gaps) of the old-growth forests that once dominated the landscape. Overly dense tree plantations, planted in the 1960s following the Mountain House Fire, along with early successional vegetation cover a large portion of the Project area. In addition, multiple decades of successful fire suppression have removed fire as a process that naturally thinned the forest. This has resulted in unnaturally high tree densities and fuel loads.

The Project is a component of a large-scale forest restoration project that will reduce the risk of catastrophic wildfire and improve ecosystem health in the Yuba River watershed through treatments over 15,473 acres on the TNF. The Project is part of a larger watershed restoration effort, the North Yuba Forest Partnership (NYFP), formed in 2019 by nine agencies and organizations. The principal goals of the partnership are to improve and restore forest health and resilience, to reduce the risk of high-severity wildfire, to protect and secure water supplies, and to protect communities from the effects of high-severity wildfire and climate change.

The activities funded through this Project will cover approximately 1,308 acres of ground-based fuels treatments that will include hand cutting, hand thinning, and hand piling small-diameter trees. These trees are located in overstocked forests, which are in an unhealthy condition. These small-diameter trees present a dual challenge as they have led to increased water demand by forest vegetation and serve as ladder fuels that lead to high-intensity, catastrophic wildfire. The specific objectives of this Project are:

- Restore forest habitat through approximately 1,308 acres of fuels reduction;
- Increase stream flow through the reduction of vegetation water demand in overstocked forests;
- Reduce catastrophic wildfire risk to forest habitat and adjacent communities; and
- Create wildlife habitat by building cover piles from slash and thinning material.

The Project will address two of the major disturbances in the region, wildfire risk and drought. First, the reduction in fuels and small-diameter tree thinning will reduce the amount of ladder fuels, modifying fire behavior to keep the fire on the ground instead of in the canopy where it will become more severe and do more damage. This Project is near several small communities (e.g., Camptonville, Goodyear's Bar) and the New Bullards Bar reservoir, so any wildfire would likely have an impact on water supply, hydropower generation, and rural populations. Secondly, the lower vegetation density will reduce competition for water during the drought years, enabling the trees that remain to have a higher chance of survival. In addition, recent research has demonstrated an increase in stream flow as a result of vegetation reductions. These research activities have demonstrated that reductions in evapotranspiration results in a linear increase in runoff, leading to increased stream flow.

Changes in stream flow will be monitored, through the grant period and beyond, through an innovative satellite-based approach of water-balance assessment being developed for forest health and restoration projects over the entire Yuba watershed. Funding to collect additional ground-based evapotranspiration data to improve the water-balance assessment and reduce uncertainty for Northern California watersheds was previously supported by a 2020 WCB SFEP grant. This Project and the new data acquired over the next several years will, collectively, further improve the accuracy of monitoring and reporting of stream flow changes from forest restoration activities.

MANAGEMENT OBJECTIVES AND NEEDS

The USFS has adopted a Management Plan that guides management actions for the TNF, including management of the Project area. Management goals are enhancement of watershed health by improving forest health and resilience to changing climatic conditions, reducing fuels for decreased fire intensity and safer fire suppression, protection and/or improvement of wildlife habitat, and maintenance and improvement of watershed and soils conditions consistent with management direction in the Tahoe National Forest Land and Resource

Management Plan (1990) as amended by the Sierra Nevada Forest Plan Amendment (2004). If at any time during the 20-year life of the Project, National Forest Foundation does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

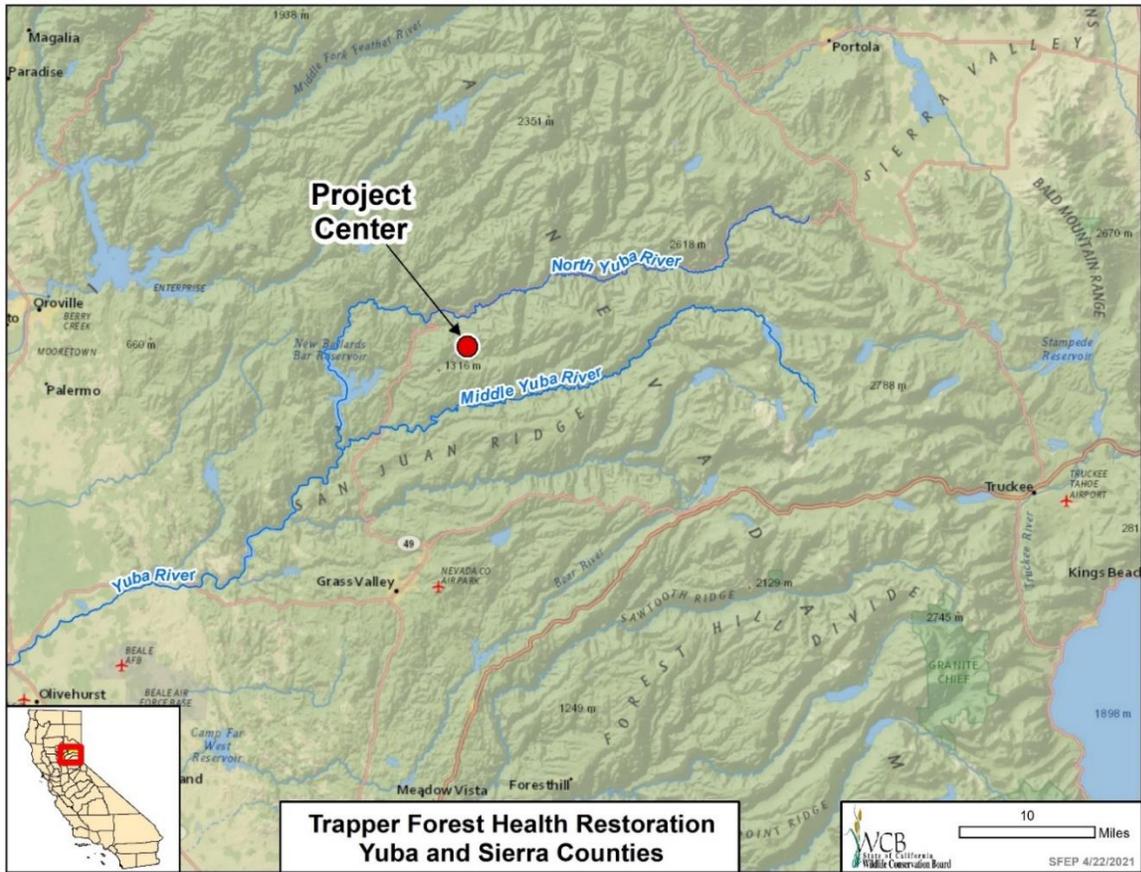
Partners	Amount
WCB	\$3,626,560
Other	\$185,000
Total	\$3,811,560

Project costs will be for project management, implementation, and water balance and stream flow reporting.

Other secured funding sources include USFS, TNF and Blue Forest.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15301, Existing Facilities, as it involves maintenance and/or minor alteration of existing facilities or topographical features including maintenance of wildlife habitat to protect fish and wildlife resources, and Section 15304, Minor Alterations to Land, as it involves minor alterations in the condition of land, water, and/or vegetation which does not involve removal of healthy, mature, scenic trees. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



32. Mill Creek Water Storage for Flow Enhancement

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$1,941,481 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Mill Creek Water Storage for Flow Enhancement
Project Type:	Implementation
Applicant/Grantee:	Trout Unlimited
Amount Recommended:	\$1,941,481
Funding Partners:	Trout Unlimited, Sonoma Resource Conservation District, Sonoma County Water Agency
Landowner(s):	Multiple private
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Mill Creek is a tributary to Dry Creek and then the Russian River, and is a priority watershed for coho salmon and steelhead trout recovery efforts. The watershed is primarily hardwood, chaparral, and conifer forest with land uses of mainly timber, rural residential, and vineyards. Old logging roads and unsustainable logging practices have had detrimental effects on the hydrology of the watershed that can be seen to this day. The project will be implemented on multiple private properties on the Mill Creek mainstem and several tributaries; the center of the project area is 4 miles west of Healdsburg.

PROJECT DESCRIPTION

Mill Creek and its tributaries have been identified by state and federal fisheries agencies as providing some of the best remaining habitat for endangered coho salmon in the Russian River watershed. Mill Creek was also selected as one of five priority Russian River tributaries for emergency action around stream flow during the 2011-2017 drought. Insufficient summer flow is a primary limiting factor for the survival of rearing coho and steelhead. The majority of landholdings within Mill Creek are privately owned and no public lands are within the watershed. Therefore, the flow enhancement strategies in this watershed are best focused on incremental impacts from storage and forbearance on private properties, the majority of which source their water from surface diversions or near-stream alluvial wells.

Mill Creek Water Storage for Flow Enhancement (Project) will provide storage for water in the winter, with participating landowners committing to forbearance of the equivalent volume of water in the summer, thereby shifting the timing of water extraction to leave more water in Mill Creek and its tributaries during the driest time

of the year when juvenile coho and steelhead are rearing in the stream. A minimum of 18 storage systems will be constructed, totaling 300,000 gallons of water storage. The stored water source will vary based on the property in question, ranging from rainwater catchment to direct diversion, wells, and springs. The total benefit to stream flow is estimated to be at least 0.2 cfs, which can be enough to keep pools connected, boosting survival of juvenile salmonids.

The stored water will serve multiple uses, including indoor and outdoor, and potable and non-potable uses. A portion of the stored water will also be dedicated for fire protection. The Project was already in development with members of the Mill Creek community prior to the 2020 Walbridge Fire (part of the LNU Complex), in response to previous catastrophic wildfires experienced in Sonoma County. The perimeter of the Walbridge fire engulfed approximately 84% of the Mill Creek watershed, underscoring the need for projects that combine stream flow enhancement with water security and fire protection.

MANAGEMENT OBJECTIVES AND NEEDS

Participating landowners will enter into agreements with TU and Sonoma Resource Conservation District (SRCD) to maintain water storage projects and forbear the equivalent amount of water from the existing source during dry season periods for a minimum of 20 years. They will be required to record these projects' maintenance and forbearance agreements on their property deeds to ensure the purposes of the Project are achieved by the landowners or successor owners for the 20-year period. TU and SRCD will maintain communication and the right to conduct inspections with participating landowners during the 20-year period to ensure fulfillment of this agreement. Maintenance of the system will be the responsibility of the landowners, but SRCD will be available to landowners as a resource for maintenance needs. If at any time during the 20-year life of the Project, TU does not ensure the Project improvements are properly maintained, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the Project life.

PROJECT FUNDING

Partners	Amount
WCB	\$1,941,481
Other	\$320,180
Total	\$2,261,661

Project costs will be for the construction of at least 18 water storage systems, continued community outreach, project management and stream flow monitoring.

Other secured funding sources include TU, SRCD, and Sonoma County Water Agency.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15303, Class 3, New Construction or Conversion of Small Structures, as new construction of water storage tanks. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



33. Salmon Creek School Water Conservation

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$2,067,390 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Salmon Creek School Water Conservation
Project Type:	Implementation
Applicant/Grantee:	North Coast Resource Conservation & Development Council
Amount Recommended:	\$2,067,390
Funding Partners:	Harmony Union School District
Landowner(s):	Harmony Union School District
County:	Sonoma
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Salmon Creek is a coastal watershed in western Sonoma County that supports threatened steelhead trout as well as a population of endangered Central California Coast (CCC) coho salmon. The Salmon Creek School Water Conservation project (Project) site is located adjacent to the Salmon Creek mainstem on Bohemian Highway in Occidental, approximately 14.5 miles upstream from the mouth of the creek where it enters the Pacific Ocean. The campus includes Harmony Elementary School and Salmon Creek Middle School, and features a creek-side observation deck, a nature trail, and a community garden to engage the students in environmental education.

PROJECT DESCRIPTION

Starting in 2008, the Russian River Coho Captive Broodstock Program has released up to 300 adult coho into Salmon Creek each winter, and successful spawning and rearing has been documented. While funding for stream flow gauging and coho monitoring in Salmon Creek has been limited compared to the lower Russian River tributaries, previous monitoring efforts have highlighted its potential for restoration as a coastal watershed for CCC coho. Spawning and rearing surveys conducted by Gold Ridge Resource Conservation District and its partners showed that, while the numbers of returned adult coho observed were far from the recovery targets, much of the salmonid life cycle phases were occurring throughout all five named tributaries and the lower and upper mainstem. Assessments of water quality and instream habitat in Salmon Creek indicate that low summer stream flow is one of the primary issues impairing ecological function of Salmon Creek, its tributaries and estuary.

By eliminating a major diversion near the limit of anadromy of the upper mainstem, the Project will provide summer stream flow benefits to rearing reaches throughout the upper and middle mainstem, which have been shown to become disconnected by late summer. The Project will eliminate the annual extraction of up to 1.5 million gallons of water from a shallow, near-stream alluvial well for playing field irrigation at Salmon Creek School, which is located immediately adjacent to Salmon Creek. This will be accomplished by shrinking the irrigated area, implementing a suite of irrigation water conservation measures, and constructing a 517,000-gallon rainwater catchment system. The Project will also relaunch a stream flow monitoring program in mainstem Salmon Creek, to both gauge effectiveness of the Project and programmatically evaluate changes in summer stream flow from previous data records.

MANAGEMENT OBJECTIVES AND NEEDS

The Harmony Union School District will sign a 20-year forbearance agreement stipulating the period of stored water use and restricting stream diversions during the late summer. The agreement will also include a detailed Maintenance and Operating Plan for the rainwater catchment system, improved playing field, and irrigation system. If at any time during the 20-year life of the Project, North Coast Resource Conservation & Development Council does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

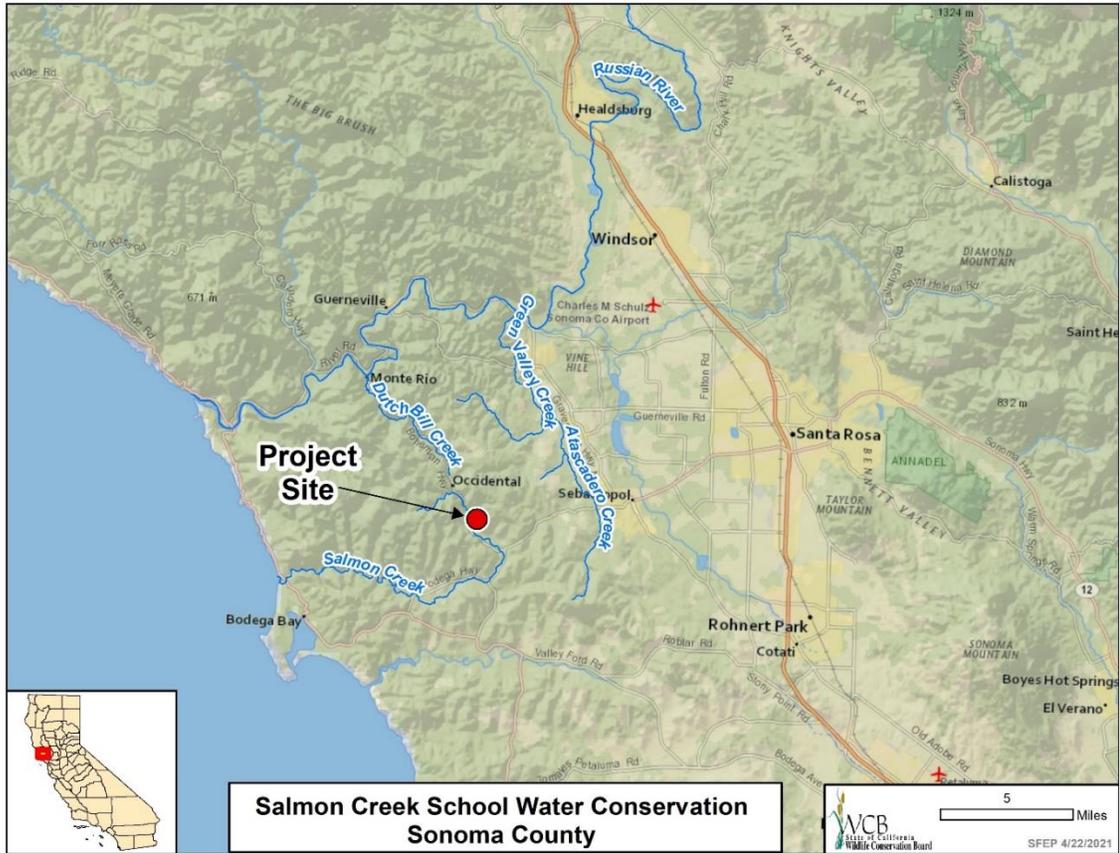
Partners	Amount
WCB	\$2,067,390
Other	\$1,688,000
Total	\$3,755,390

Project costs will be for obtaining permits, constructing a rainwater catchment system, implementing water conservation measures, and conducting stream flow and habitat monitoring.

Other secured funding sources include Harmony Union School District (local bond funding).

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines Section 15303, Class 3, New Construction or Conversion of Small Structures, as construction of a rainwater catchment system; Section 15304, Class 4, Minor Alterations to Land, as alterations to the irrigated landscape; and Section 15314, Class 14, Minor Additions to Schools, as additional infrastructure on a school campus. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



34. San Geronimo Conservation Easement and Flow Enhancement

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$2,203,000 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	San Geronimo Conservation Easement and Flow Enhancement
Project Type:	Conservation Easement (135± acres)
Applicant/Grantee:	Marin Open Space Trust
Amount Recommended:	\$2,203,000
Funding Partners:	California Natural Resources Agency
Landowner(s):	The Trust for Public Land
County:	Marin
Strategic Plan:	Goals: B.1 Objectives: SI 2.3, 2.4
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

The San Geronimo Conservation Easement and Flow Enhancement acquisition project (Project) will occur on 135± acres of the former San Geronimo Golf Course (Property), in the Lagunitas Creek Watershed (LCW) located approximately eight miles northwest of San Raphael in Marin County. San Geronimo and Larsen creeks flow through the Property. Larsen Creek is a tributary of San Geronimo Creek, which is tributary to Lagunitas Creek.

PROJECT DESCRIPTION

The former 18-hole golf course was operated between 1965 and 2018, when it was sold to The Trust for Public Land (TPL). Golf course operations were ceased in January 2019, but TPL continues to exercise its appropriative water right. The Property provides valuable wildlife connectivity across the San Geronimo Valley floor connecting adjacent habitat areas to the north and south; supports important riparian, oak, and grassland habitats; and provides extensive and diverse habitat for native flora and fauna.

The Project entails the acquisition of a conservation easement by Marin Open Space Trust (MOST) over 135± acres of the former San Geronimo Golf Course in Marin County, and the permanent dedication of 20 acre-feet per year (AFY) as instream flow to Larsen Creek to support special-status salmonids. The terms of the conservation easement will restrict land use on the Property to open space and passive recreation in perpetuity, preventing any conversion or subdivision of the Property that could significantly diminish or impair these values, while enabling comprehensive restoration of the Property.

The Project includes temporary forbearance, followed by permanent dedication (via California Water Code Section 1707) of the full amount of the appropriative

right (20 acre-feet per year) to instream flow in Larsen Creek. Both the temporary and permanent forbearance requirements will be reinforced through prohibitions on diversion, well development, and irrigation in the conservation easement.

The Property is of great interest for conservation, restoration, and preservation of stream flow because of its location spanning the San Geronimo Valley, which contains the last undammed tributary at the upper reaches of the LCW – a watershed that is of statewide significance for the federal and state-listed Central California coast coho salmon, steelhead trout, and California freshwater shrimp. Chinook salmon in the LCW are considered a Species of Concern by federal and state agencies. Significant reaches of San Geronimo Creek and Larsen Creek flow through the Property, and both serve as critical spawning and rearing habitat for coho salmon and steelhead trout. However, use of a complex water extraction system to irrigate the golf course has impaired fish habitat by diverting water from Larsen Creek during a critical time for adult salmon migration, impacting habitat values in both Larsen and downstream reaches of San Geronimo Creeks. In addition, historic uses of the Property resulted in significant alteration of the floodplain and riparian valley habitat that once existed.

The Project's in-stream dedication will permanently prevent the removal of these flows in Larsen and San Geronimo creeks. The Project also involves the installation and monitoring of a new stream flow gauge on Larsen Creek to evaluate stream flow conditions and responses to the instream flow dedication. Finally, the permanent protection of the Property and its associated water right will provide site control for the comprehensive restoration of Larsen and San Geronimo creeks, their floodplains, and riparian areas.

The Property will also provide a publicly accessible natural open space that is available to support compatible community and recreational uses, consistent with the Conservation Easement. For example, a portion of the existing network of golf cart paths will be adapted to a publicly accessible, multi-use trail system, with connectivity to surrounding open spaces.

MANAGEMENT OBJECTIVES AND NEEDS

The Conservation Easement will be owned and managed by MOST. MOST will hold, manage, and be responsible for monitoring and enforcing the Conservation Easement in perpetuity per WCB grant terms. A baseline report will be completed by MOST and approved by WCB. The Conservation Easement permits access to the Property by both MOST and WCB staff for monitoring purposes.

PROJECT FUNDING

Partners	Amount
WCB	\$2,203,000
Other	\$1,000,000
Total	\$3,203,000

The purchase price will be at or below fair market value as determined through a DGS approved appraisal.

The majority of the Project costs will be for acquiring the conservation easement. Additional Project costs will be for instream dedication, monitoring, and reporting.

The other secured funding source is the California Natural Resources Agency.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15313, Class 13, Acquisition of Lands for Wildlife Conservation Purposes, as an acquisition of lands for fish and wildlife conservation purposes, including preservation of fish and wildlife habitat; Section 15301, Class 1, Existing Facilities, as operation, repair, maintenance, and minor alteration of existing facilities for maintenance of wildlife habitat areas and stream flows to protect fish and wildlife resources; and Section 15304, Class 4, Minor Alterations to Land, as minor alterations to land and water. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



35. Little Butano Creek Flow Enhancement, Butano State Park

STAFF RECOMMENDATION

Staff recommends that WCB approve this project as proposed; allocate \$2,636,208 from the Water Quality, Supply, and Infrastructure Improvement Fund of 2014 (Proposition 1), CWC Section 79733; authorize staff to enter into appropriate agreements necessary to accomplish this project; and authorize staff and CDFW to proceed substantially as planned.

Project Title:	Little Butano Creek Flow Enhancement, Butano State Park
Project Type:	Implementation
Applicant/Grantee:	San Mateo Resource Conservation District
Amount Recommended:	\$2,636,208
Funding Partners:	California State Parks
Landowner(s):	California State Parks
County:	San Mateo
Strategic Plan:	Goals: B.1 Objectives: SI 2.3
Disadvantaged Community:	Not within a disadvantaged community

LOCATION

Butano State Park is located in coastal San Mateo County, about 18 miles south of Half Moon Bay and 3.5 miles inland from Pigeon Point lighthouse. The 4,728-acre park offers camping and hiking opportunities in a secluded canyon filled with second-growth redwoods and scattered patches of oak woodland, riparian, and chaparral habitats. The canyon is formed by Little Butano Creek, a tributary to the Pescadero-Butano lagoon and marsh system.

PROJECT DESCRIPTION

The Pescadero-Butano watershed is a highly significant coastal wetland on the Central California coast. Combined, the two creeks drain 81 square miles of coastal valleys, hills, and terraces around the town of Pescadero. Historically, the Pescadero-Butano watershed supported robust steelhead trout and coho salmon runs, but these species have experienced substantial declines over the past century. Currently, the Butano State Park (BSP) domestic water system draws 100% of its supply from a single point of diversion on Little Butano Creek. Stream gauge data collected during the dry season in water years 2007 to 2016 revealed that this diversion uses approximately 22% of the creek's flow, but that number jumped to as high as 50% during the 2014 to 2016 drought. The currently recognized best practice to protect stream flow during dry summer months is to divert no more than 10% of flow.

The Little Butano Creek Flow Enhancement, Butano State Park project (Project) will create a reliable, drought-resilient water supply for the BSP facilities and campgrounds, improving and protecting flow in Little Butano Creek. This will be accomplished through the following Project objectives:

- Reduce total water demand by 35% by fixing systemic pipeline leaks and upgrading fixtures.
- Reduce the diversion rate by 66% between April 1st and September 14th by installing a pump that can operate at a lower diversion rate and constructing a 100,000-gallon water storage tank that will operate as a regulating reservoir.
- Forbear 100% of diversions from September 15th to October 31st annually, corresponding with the lowest average stream flow periods, and dedicate 0.04 cfs to stream flow annually.
- Limit diversions to 10% of average stream flow the remainder of the year.

The CZU Lightning Complex Fires in August 2020 burned over 86,000 acres in the Santa Cruz Mountains, including the Pescadero-Butano watershed. BSP was heavily impacted by these fires, including the loss of the majority of the BSP's vegetation. The existing pump house and pump at the BSP's point of diversion were destroyed, as were a significant portion of the water lines that connected the water treatment plant to the rest of BSP. Therefore, in addition to the work being completed through this Project, BSP will install a new variable speed pump and replace damaged pipelines to make the new system as efficient as possible and further reduce the chance of leaks. More broadly, the impacts of this fire on streamside habitats make both stream flow enhancement and management of BSP's limited water resources especially critical. The above actions will help ensure that Little Butano Creek has enough water to keep pools connected and water temperatures low, even in extreme drought years. Planning for this Project, including development of designs, was supported through a WCB SFEP grant to the San Mateo Resource Conservation District.

MANAGEMENT OBJECTIVES AND NEEDS

The San Mateo Resource Conservation District and Project partner TU have prepared a draft forbearance and management agreement to help protect the Project's long-term viability. BSP will enter into this agreement to ensure that stream flow protection goals are met, and maintenance and monitoring measures are adhered to. The agreement will last a minimum of 20 years and will be registered with San Mateo County and recorded on the deed of the property. If at any time during the 20-year life of the Project, San Mateo Resource Conservation District does not manage and maintain the project improvements, the Grant Agreement requires that it refund to the State of California an amortized amount of funds based on the number of years left on the project life.

PROJECT FUNDING

Partners	Amount
WCB	\$2,636,208
Other	\$350,000
Total	\$2,986,208

Project costs will be for construction of the tank, appurtenances and distribution piping, installation of high efficiency water fixtures, stream flow monitoring and permitting, and project management.

Other secured funding sources include California State Parks.

CEQA REVIEW AND ANALYSIS

The Project is proposed as exempt from CEQA pursuant to the State CEQA Guidelines, Section 15301, Class 1, Existing Facilities, as minor alteration of existing public structures and maintenance of stream flows to protect fish and wildlife resources; and Section 15303, Class 3, New Construction or Conversion of Small Structures, as construction of a water storage and distribution system. Subject to approval of this proposal by WCB, the appropriate NOE will be filed with the State Clearinghouse.



Adjourn

ATTACHMENT A – DEFINITIONS AND ACRONYMS

PROP 1 DEFINITION

Disadvantaged Community – a community with an annual median household income that is less than 80 percent of the statewide annual median household income (CWC § 79505.5[a]).

ACRONYMS

Americans with Disabilities Act	ADA
Bureau of Land Management	BLM
California Department of Fish and Wildlife	CDFW
California Department of Finance	DOF
California Department of Forestry and Fire Protection	CAL FIRE
California Department of General Services	DGS
California Department of Transportation	Caltrans
California Department of Water Resources	DWR
California Endangered Species Act	CESA
California Environmental Quality Act	CEQA
California Fish and Game Commission	FGC
California Natural Resources Agency	CNRA
Conceptual Area Protection Plan	CAPP
Disadvantaged Community	DAC
Habitat Conservation Plan	HCP
Mitigated Negative Declaration	MND
National Environmental Policy Act	NEPA
National Marine Fisheries Service	NMFS
National Oceanic and Atmospheric Administration	NOAA
Natural Community Conservation Plan	NCCP
Notice of Determination	NOD
Notice of Exemption	NOE
Resource Conservation District	RCD
Resource Conservation Investment Strategy	RCIS
Severely Disadvantaged Community	SDAC
Sierra Nevada Conservancy	SNC
State Coastal Conservancy	SCC
Sustainable Groundwater Management Act	SGMA
Tahoe National Forest	TNF
Trout Unlimited	TU
U.S. Fish and Wildlife Service	USFWS
U.S. Forest Service	USFS
Wildlife Conservation Board	WCB

ATTACHMENT B – WCB STRATEGIC PLAN GOALS AND OBJECTIVES

GOAL A. ENVIRONMENTAL PROTECTION AND CONSERVATION

Acquire and invest in wildlife habitat and natural areas, and work towards long-term, landscape level conservation, habitat quality and connectivity, and the success of wildlife species and populations.

A.1 Fund projects and landscapes that provide resilience for native wildlife and plant species in the face of climate change.

A.2 Fund projects and landscape areas that conserve, protect, or enhance water resources for fish and wildlife.

A.3 Fund projects that support the implementation of Natural Community Conservation Plans, Habitat Conservation Plans and recovery of listed species.

A.4 Invest in priority conservation projects recommended under CDFW's land acquisition evaluation process or within other conservation plans supported by CDFW.

A.5 Improve transparency and efficiency of WCB and CDFW project evaluation and recommendations to approve or deny applications

A.6 Coordinate acquisition application processes to ensure that WCB project evaluation is unified across programs to the fullest possible extent.

GOAL B. ENVIRONMENTAL RESTORATION AND ENHANCEMENT

Work with partners to restore and enhance natural areas, create viable habitat on working lands, manage adaptively, and ensure long-term ecosystem health.

B.1 Invest in projects and landscape areas that help provide resilience in the face of climate change, enhance water resources for fish and wildlife and enhance habitats on working lands.

B.2 Strengthen the grant application process to further highlight the importance of the following factors in project design and selection: robustness and resilience to extreme weather events, ecosystem services (e.g. groundwater recharge, flood reduction, fire prevention, etc.), water quality and quantity, and compatible public use and access.

B.3 Improve transparency and efficiency of WCB and CDFW project evaluation and recommendations to approve or deny applications.

B.4 Expand project monitoring and evaluation of restoration activities to assess long-term project success, moving beyond compliance monitoring.

B.5 Provide opportunities for greater public involvement in restoration projects.

GOAL C. PUBLIC USE AND RECREATION

Leverage WCB investments in programs and projects by expanding opportunities for outdoor wildlife-oriented recreational activities that are compatible with conservation goals.

C.1 Support a wide range of recreational activities (e.g. hunting, fishing, birding, hiking, camping, photography, etc.) in conjunction with other land uses and without degrading environmental resources.

C.2 Document and describe the current public access project evaluation and selection processes and explore the option of establishing a competitive grant making cycle for the Public Access Program.

C.3 Standardize existing project monitoring protocols to facilitate consistent reporting and improved performance management.

C.4 Place greater emphasis on projects that accommodate compatible wildlife-oriented public uses, while supporting urban areas and disadvantaged communities.

GOAL E. Fiscal and Organizational Effectiveness

E.1 Maximize expenditure of remaining bond funds and identify opportunities to leverage existing funds as effectively as possible.

SI 1: CLIMATE CHANGE ADAPTATION, RESILIENCY, AND MITIGATION (PLAN GOALS A, B, AND C)

OBJECTIVE SI 1.1 Invest in at least three wildlife under-or over-crossings each year for the next three years (2019 - 2021), in locations deemed high priority by both transportation and fish and wildlife agencies.

OBJECTIVE SI 1.2 Invest in at least five projects that contribute to connectivity as highlighted in the California Terrestrial Connectivity Map, or linkages as mapped in regional assessments.

OBJECTIVE SI 1.3 Ensure 40 percent of all acquisition and restoration projects are in areas identified as habitat for vulnerable species or as highly resilient to climate change.

OBJECTIVE SI 1.4 Invest in at least five projects that provide long-term measurable carbon sequestration benefits.

OBJECTIVE SI 1.5 Collaboratively develop and publish criteria for addressing catastrophic natural resource events like extreme fire and prolonged drought, for inclusion as priorities in future solicitations.

OBJECTIVE SI 1.6 Collaboratively identify and fund five upper watershed improvement projects each year that have a primary or secondary purpose of providing resilience to climate change

SI 2: BIODIVERSITY ACTIONS (PLAN GOALS A AND B)

OBJECTIVE SI 2.1 Increase habitat for sensitive species to support biodiversity through statewide protection or restoration of oak woodlands, riparian habitat, rangeland, grazing land, and grassland habitat by funding at least 10 projects in each of these WCB programs with at least 25 percent of restoration projects on conserved lands.

OBJECTIVE SI 2.2 Each year, invest in at least three acquisitions and two restoration grants that advance habitat and natural community targets embodied in RCIS, NCCPs, or regional conservation plans.

OBJECTIVE SI 2.3 Implement at least 10 projects each year that enhance stream flow, increase water resiliency and meet priorities in the California Water Action Plan.

OBJECTIVE SI 2.4 Ensure 75 percent of all approved projects meet one or more conservation priorities expressed in the SWAP.

OBJECTIVE SI 2.5 Protect or restore at least 1,000 acres each of riparian, wetlands, and grassland habitats in priority areas as defined in the SWAP.

SI 3: PUBLIC ACCESS AND WILDLIFE-ORIENTED RECREATION (PLAN GOAL C)

OBJECTIVE SI 3.1 Invest in at least five projects providing public access for disadvantaged or severely disadvantaged communities.

OBJECTIVE SI 3.2 Invest in at least five projects providing boating/fishing/hunting access to disadvantaged communities and providing additional facilities for mobility-impaired visitors and/or access compliant with the Americans with Disabilities Act.

OBJECTIVE SI 3.3 Invest in at least 10 projects that provide hunting or fishing opportunities (at least five each).

OBJECTIVE SI 3.4 Invest in at least 10 projects that have a primary or secondary purpose of non-consumptive wildlife recreation, such as bird watching or hiking.

OBJECTIVE SI 3.5 Attend or conduct at least two meetings per year that provide outreach, workshops, and materials to increase visibility of the WCB Public Access Program. At least one should be in a disadvantaged community.

SI 4: ECOSYSTEM SERVICES (PLAN GOAL A, B AND D)

OBJECTIVE SI 4.1 Each year, invest in at least five acquisition or restoration projects that have a demonstrated and measurable upper watershed ecosystem services benefit.

OBJECTIVE SI 4.2 Each year, invest in at least three projects that have a primary purpose of conserving or restoring native pollinator habitat in locations that provide a measurable ecosystem services benefit.

OBJECTIVE SI 4.3 Invest in at least five projects that provide tangible ecosystem services benefits to local lower watershed (urban or rural) communities, and document that benefit.

SI 5: PARTNERSHIPS (PLAN GOALS A, B, C, AND D)

OBJECTIVE SI 5.1 Invest in at least three projects that support state or federal Safe Harbor programs.

OBJECTIVE SI 5.2 Conduct outreach, including meetings or field visits to five new partners per year.

OBJECTIVE SI 5.3 Implement at least three competitive grant solicitations over the next five years that have been coordinated among multiple organizations and are directed at a high priority habitat per WCB program priorities.

OBJECTIVE SI 5.4 Per the USFWS Urban Wildlife Conservation Program, establish a new partnership with one urban community each year to support nature and wildlife connections consistent with WCB programs.

SI 6: WCB ORGANIZATION AND TRANSPAREN-CY (PLAN GOALS D AND E)

OBJECTIVE SI 6.1 By the end of 2020, implement a system to make WCB meetings accessible online.

OBJECTIVE SI 6.2 By the end of 2020, make substantial progress in standardizing solicitation content, criteria, and process, and develop an online application portal for competitive grants.

OBJECTIVE SI 6.3 By the end of 2020, update the WCB website to include current goals, targets, metrics, and conservation priorities for each WCB Program.

OBJECTIVE SI 6.4 By the end of 2020, develop and make mapped data that illustrates WCB projects and their relationship to program conservation objectives available to the public.

OBJECTIVE SI 6.5 Each year, hold at least one conservation partner workshop in a different part of the state, to discuss competitive grant programs and receive feedback.

OBJECTIVE SI 6.6 Sponsor at least five conferences or workshops each year throughout the state and distribute outreach materials about WCB programs.

SI 7: NATURAL RESOURCE CONSERVATION LEADERSHIP (PLAN GOALS D AND E)

OBJECTIVE SI 7.1 Take the lead to coordinate among the state conservancies and other agencies, regarding habitat-based priorities for upcoming competitive grant solicitations.

OBJECTIVE SI 7.2 Participate in the development and implementation of the natural working lands elements of the State Safeguarding and Scoping Plans.

OBJECTIVE SI 7.3 With CDFW, complete a unified, simplified process to identify CDFW's acquisition investment priorities and obtain CDFW's review and endorsement of WCB projects

OBJECTIVE SI 7.4 Participate in statewide policy development efforts to improve fire resiliency and forest management through natural resource protection and restoration.

OBJECTIVE SI 7.5 Refine priority conservation areas for each WCB program (consistent with overall WCB goals), and report progress toward program-specific goals annually or biannually

SI 8: MONITORING AND PROGRAM EVALUATION (PLAN GOAL E)

OBJECTIVE SI 8.1 By 2021, define criteria for effectiveness monitoring by program, habitat or geography.

OBJECTIVE SI 8.2 Through continued implementation of the annual monitoring program, by 2024, cumulatively monitor 20 percent of completed projects, summarize the project compliance results, and post on the WCB website.

OBJECTIVE SI 8.3 By 2024, make the monitoring survey platform accessible on the WCB website for use by project partners.

OBJECTIVE SI 8.4 Include monitoring data in each WCB annual report and list projects by county and by SWAP habitat type.

OBJECTIVE SI 8.5 By 2022, update the WCB 60-year assessment—for WCB’s 75th anniversary—to highlight program accomplishments, including the acreage of habitat type preserved and restored.