

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
072	Acquisition	River Partners	San Joaquin River - Grayson Property Acquisition Project	Stanislaus	<ul style="list-style-type: none"> Acquire 285 acres of primary floodplain on the San Joaquin River, between its confluence with the Merced River and the Tuolumne River. River Partners holds an executed purchase agreement and completed land appraisal that are current through May 2016. Currently these lands are used for irrigated agriculture, producing alfalfa to supply forage for adjacent dairies. River Partners would acquire the lands for potential future riparian and floodplain enhancement supporting threatened and endangered riparian-obligate species, with the expectation of eventually permanently retiring agricultural irrigation which will enhance stream flow and water quality in the San Joaquin River. 	<ul style="list-style-type: none"> Project will provide the opportunity for the permanent retirement of irrigated agriculture from the primary floodplain of the San Joaquin River. Expected future work on site would restore the floodplain function. 	\$2,882,448.00	\$2,918,500.00	<ul style="list-style-type: none"> Project proposes to stop irrigating alfalfa, and enhance stream flow by primary flow. Project has potential for high groundwater recharge, and to stop erosion. Area is important to region 4. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	94.3	Yes
020	Acquisition	American Rivers	Firebaugh Madera Floodplain Restoration Project	Madera	<ul style="list-style-type: none"> Funds from WCB will enable the applicants to acquire fee simple interest in 290 acres on two properties of historical wetland and riparian habitat north of Firebaugh and discontinue current irrigation with shallow groundwater. 	<ul style="list-style-type: none"> The project will enhance stream flows and water quality by reducing irrigation demand and polluted drainage from the acquired parcels. In addition to these direct stream flow enhancements, fee simple acquisition of the properties will allow the project team to eventually restore floodplain processes that will increase post-flood up baseflows and reduce water temperatures during the critical spring rearing and outmigration period for Chinook salmon. 	\$3,469,049.00	\$6,889,049.00	<ul style="list-style-type: none"> The importance of functional flood plains is clearly illustrated as are the goals for the future of this property once the acquisition is complete. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	91.5	Yes
069	Implementation	The Resource Conservation District of Monterey County	The Salinas River Arundo Eradication Project Phase III	Monterey	<ul style="list-style-type: none"> Clear 350 acres of the invasive non-native plant Arundo donax (giant reed) on 15 river miles of the Salinas River. This project includes a comprehensive monitoring program that will quantify project benefits through analysis with a pre-existing 2-dimensional hydraulic model developed with project partners and informed by detailed treatment area surveys, and shallow groundwater level tracking with two arrays of monitoring wells set in strategic locations in the work area. 	<ul style="list-style-type: none"> The project will save 7,000 acre feet of water per year by eliminating Arundo from 15 river miles of the Salinas River. 	\$3,389,560.00	\$4,077,560.00	<ul style="list-style-type: none"> Impressive acreage proposed Good maintenance and monitoring plan <p>CEQA: Mitigated Negative Declaration complete and findings</p>	104.0	Yes
054	Implementation	Humboldt County Resource Conservation District	Reconnecting Stream Flows in the Lower Eel River Delta	Humboldt	<ul style="list-style-type: none"> This implementation project proposes to reconnect the Francis Creek and Williams Creek tributaries back to the Salt River by removing 97,200 Cubic Yard (CY) of sediment from the Salt River channel and floodplains, enhancing 2.5 miles of in-channel complexity, and restoring 47.3 acres of the riparian and wetland corridor. 	<ul style="list-style-type: none"> Project enhances flow by reconnecting Francis Creek and Williams Creek tributaries back to the Salt River by removing 97,200 Cubic Yard (CY) of sediment from the Salt River 	\$2,629,826.00	\$4,572,353.00	<ul style="list-style-type: none"> Applicant funded by California Department of Fish and Wildlife for a complementary project to the one WCB received. Project proposes to remove a sizable amount of sediment in dairy land, and reduces magnitude of flood events which will help dairy owners. Project enhances fish migration, protects riparian corridors, and reconnects tributary flows. The whole Eel River is a priority stream for anadromous fish to California Department of Fish and Wildlife and State Water Resources Control Board. <p>CEQA: Environmental Impact Report complete and findings</p>	100.0	Yes
018	Implementation	Tuolumne River Trust	Dos Rios Section 1707 Project	Stanislaus	<ul style="list-style-type: none"> Applicant is requesting WCB funds to petition the State Water Resources Control Board for the permissive flexibility to dedicate between 2,000 and 5,400 acre feet of its riparian water rights to instream fish and wildlife beneficial uses pursuant to Water Code Section 1707 Instream Flow Dedication and as a voluntary Delta outflow toward the Golden Gate. This project will be at the forefront of innovative California voluntary water transactions that ensure both farms and fish can co-exist and thrive alongside one another into the future. 	<ul style="list-style-type: none"> Project objective is to petition the State Water Resources Control Board for the permissive flexibility to dedicate between 2,000 and 5,400 acre feet of its riparian water rights to instream fish and wildlife beneficial uses pursuant to Water Code Section 1707 Instream Flow Dedication and as a voluntary Delta outflow toward the Golden Gate. Project will result in dedication of water for instream flow. 	\$75,000.00	\$100,000.00	<ul style="list-style-type: none"> One important value of this project is as a model for future conservation easements along riparian areas. The water right is significant, is riparian and has documented recent use. Depending on other downstream riparian diverters (unclear how many there are from the proposal) the project could provide measureable benefits locally at important times of the year <p>CEQA: 15304. Minor public or private alterations in the condition of water</p>	97.8	Yes

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028	Implementation	Gold Ridge Resource Conservation District	Green Valley Creek Rural Water Conservation Project	Sonoma	<ul style="list-style-type: none"> Implement four designs, consisting of agricultural and rural residential rainwater catchment and off-channel water storage systems, along a critical 2,000-foot reach of upper Green Valley Creek, each designed to eliminate or drastically reduce May-October alluvial well withdrawals by providing a total of over 250,000 gallons of storage. The systems are currently under design through the Coho Partnership's National Fish and Wildlife Foundation funding; one design is complete. Implement comprehensive water conservation plans for an estimated water savings of an additional 250,000 gallons. Plans will include a suite of components: rainwater catchment intended to replace stream withdrawals and enhance water supply reliability, off channel water storage development, use of soil and plant monitoring devices to decrease irrigation demand, greywater systems, irrigation efficiency upgrades, and storm water management/groundwater recharge. Stream flow data for the reach will be collected and analyzed from existing gauges through continuing Coho Partnership efforts, while RCD staff will perform visual surveys of pool connectivity and collect pool water quality data. While summer streamflow from year to year is highly dependent on weather conditions, the goal of the program is to maintain coho rearing pool connectivity and quality throughout the 2,000-ft implementation reach of Upper Green Valley Creek. 	<ul style="list-style-type: none"> Project will implement actions to reduce or eliminate stream diversions. 	\$508,376.00	\$786,706.00	<ul style="list-style-type: none"> A clear project that addresses a high priority need throughout the proposed project reach. Includes landowner cost share requirements and a 20 year forbearance agreement tied to the deed <p>CEQA: 15304. Minor Alterations to Land 15333. Small Habitat Restoration Projects.</p>	93.0	Yes
041	Implementation	Sanctuary Forest Inc.	Mattole Headwaters Streamflow Enhancement Implementation Project	Humboldt and Mendocino	<ul style="list-style-type: none"> The project will include approximately 3 acres of wetland restoration on an upslope terrace along Baker Creek as well as forest thinning on approximately 23 acres along two reaches of the Mattole headwaters main stem and Mill Creek. Objectives for Baker Creek include improved groundwater storage and summer streamflow along with increased wetland vegetation and associated fish and wildlife benefits. The forest thinning will address the impacts of overly dense forests in the Mattole headwaters. To the extent feasible, lop and scatter and/or chipping of slash will be used to help build up the mulch layer and to promote rainwater infiltration. The combined benefits of increased rainwater infiltration along with reduced evapotranspiration will enable reshaping of the stream hydrograph and increased summer flows. 	<ul style="list-style-type: none"> The proposed upland wetland restoration aims to increase groundwater storage by approximately 10 million gallons and result in streamflow benefits sufficient to maintain pool habitat even in the most severe drought years. 	\$356,744.00	\$465,028.00	<ul style="list-style-type: none"> Increases in streamflow and groundwater storage would provide a significant benefit to rearing coho and other salmonids. With the low numbers of coho in the system, any improvements in known rearing habitat are likely to aid in the continued existence of coho in the Mattole. The methodology could be implemented on a much larger scale. <p>CEQA: 15304. Minor Alterations to Land 15333. Small Habitat Restoration Projects</p>	91.3	Yes
052	Implementation	Sonoma Resource Conservation District	Porter Creek Streamflow Enhancement Project	Sonoma	<ul style="list-style-type: none"> Build an innovative, permanent water release system from reservoir that will provide up to 150 acre feet of water for coho and allow the flexibility to control release rates to more fully understand how streamflow affects fish. This project will serve as an example to other grape growers and raise awareness of the greater community about the importance of balancing the water needs of fish and people. Streamflow, water quality, and fish monitoring will be conducted for three years to further understand how the water releases affect the fish and inform recommendations for the long-term operation and management of the water release system. 	<ul style="list-style-type: none"> Water stored in reservoir will be released for over-summering habitat and smolt out migration. This shovel-ready project will sustain in-stream pool habitat for listed coho salmon in Porter Creek in the dry season and provide higher flow releases to allow coho smolt out-migration in the spring. 	\$450,804.00	\$596,733.00	<ul style="list-style-type: none"> Porter Creek is a critical area for Coho, and there is the potential for good monitoring data to be generated from this project. <p>CEQA: 15304. Minor Alterations to Land</p>	90.3	Yes
070	Implementation	The Thacher School	The Thacher School Instream Flow Resiliency and Dormitory Conservation Project	Ventura	<ul style="list-style-type: none"> This project will capture 920,000 gallons of rainwater, enhancing water supply; reduce the erosive effects of storm events in the upper Ojai Basin; and reduce discharge of nutrient rich stormwater pulses to the San Antonio watershed. Voluntarily forbear water right and not divert surface water up to 0.92 cfs during March through April. This is made possible through development of an alternative onsite water supply of captured stormwater, which will be used for school orchard and landscape irrigation, as well as 100% of all dormitory toilet flushing The Thacher School will use the project as part of an educational installation that demonstrates the connection between water conservation, management, and land use to remove critical barriers to support resilient instream flow and riparian habitat. 	<ul style="list-style-type: none"> Project will develop an onsite alternative water supply by capturing stormwater (920,000 gallons) for irrigation needs and rainwater for dormitory toilet flushing. Applicant will forbear diverting surface water (0.92 cfs) during March and April. 	\$836,221.00	\$1,099,951.00	<ul style="list-style-type: none"> Proposal is an example of a volunteer forbearance program. Ventura is a target watershed for steelhead recovery Since fish have adapted to highly infrequent flows, any additional flow is extremely important. Reducing diversions from Thatcher Creek will benefit San Antonio Creek <p>CEQA: 15303. New Construction or Conversion of Small Structures 15304. Minor Alterations to Land</p>	85.3	Yes

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042	Planning	Sanctuary Forest Inc.	Mattole Headwaters Streamflow Enhancement Planning Project	Humboldt and Mendocino	<ul style="list-style-type: none"> This planning project will make possible the development and permitting of 6 streamflow enhancement projects located on 5 tributaries and the headwaters of the Mattole River. The project types include wetland restoration, off channel recharge ponds, restoration of entrenched streams and instream habitat. The planning for these projects will be conducted at a level sufficient to qualify for implementation funding. The project will also obtain streamflow data on 8 downriver tributaries that have been prioritized for coho habitat recovery. This streamflow data is needed for development of streamflow and coho habitat enhancement projects. 	<ul style="list-style-type: none"> Six streamflow enhancement projects are likely to be implemented leading to enhancement of stream flow. 	\$565,048.00	\$622,918.00	<ul style="list-style-type: none"> This area has a good history of tank forbearance programs. Important watershed for steelhead, and potentially chinook as well. Drastic changes needed in this area in order to try to get in front of impacts from climate change. <p>CEQA: 15262. Feasibility and Planning Studies</p>	102.0	Yes
045	Planning	Mendocino County Resource Conservation District	Navarro River Watershed – Plan for Streamflow Optimization and Enhancement	Mendocino	<ul style="list-style-type: none"> The Mendocino County Resource Conservation District (MCRCD), The Nature Conservancy (TNC), and Trout Unlimited (TU) have joined forces in the Navarro River watershed to conduct a collaborative planning and implementation prioritization process that will identify and complete preliminary designs for projects to enhance and optimize stream flows. In the planning process applicant will: <ul style="list-style-type: none"> Review existing restoration plans for the watershed and compile a comprehensive list of streamflow restoration recommendations. Convene and engage a Technical Advisory Group (TAG) of private and public stakeholders to update restoration recommendations. Conduct feasibility analyses, scientific studies, and water diversion evaluations in order to create a reach-specific prioritized implementation plan and timeline. 	<ul style="list-style-type: none"> Project will lead to between 5 and 8 implementation projects which will enhance flow in a priority watershed. 	\$375,284.00	\$538,393.00	<ul style="list-style-type: none"> The Navarro River is temperature and sediment impaired and the area is important for the recovery of the Central California Coast coho salmon and threatened Northern California Coast steelhead trout, and currently has 3 recovery plans This proposal purpose is to move forward with water conservation and planning to alleviate some of the impacts on the water resources and thus benefit the associated aquatic resources. This planning project is proposed by a team capable of fulfilling the project's objectives and will likely lead to 5-8 implementation projects enhancing flow on an important river. <p>CEQA: 15262. Feasibility and Planning Studies</p>	98.0	Yes
062	Planning	Resource Conservation District of Santa Cruz County	Soquel Creek Stream Flow Stewardship Project (SCSSP)	Santa Cruz	<ul style="list-style-type: none"> Through a partnership between the Resource Conservation District of Santa Cruz County (RCDSCC), Trout Unlimited (TU) and private landowners and water users in the Soquel Creek Watershed develop high-priority and technically and socially-feasible projects that yield benefits for fisheries and human populations. Tasks would include conducting a hydraulic analysis, collecting stream flow data, quantifying existing human water use, identifying alternative sources of water such as winter flow storage and rainwater harvesting, identifying priority stream reaches, identifying the most promising project types and locations for increasing stream flows, analyzing the necessary permits and approvals for those projects, and forming the necessary relationships with willing landowners. Outcomes are likely to include improvements in water use efficiency, off stream storage projects, rotations of diversion, tank development, ponds, and alternatives to streamside wells. 	<ul style="list-style-type: none"> Through the hydraulic analysis, this project will identify the critical reaches where implementation projects such as tanks, ponds etc. could be implemented to improve water use efficiencies and rotations of diversions. 	\$211,372.00	\$254,155.00	<ul style="list-style-type: none"> Important watershed to help support steelhead <p>CEQA: 15262. Feasibility and Planning Studies</p>	95.3	Yes
061	Planning	Sonoma Ecology Center	Sonoma Creek Streamflow Stewardship Program, Phase 1	Sonoma	<ul style="list-style-type: none"> The project will follow the model of the Coastal Streamflow Stewardship Project, a collaborative effort led by Trout Unlimited and Center for Ecosystem Management and Restoration, to implement a plan for streamflow restoration and stewardship through changes in water use and management that benefit both anadromous fish and the Sonoma Valley community. WCB funds will contribute to the installation and monitoring of five streamflow gages to establish the location, quantity, and timing of streamflow to benefit salmonid species, generate a Sonoma Creek Streamflow Stewardship plan, and engage landowners in planning for specific streamflow enhancements. 	<ul style="list-style-type: none"> This planning project will conduct the data collection, legal analysis, and landowner outreach necessary for planning for streamflow enhancement projects. 	\$118,801.00	\$190,183.00	<ul style="list-style-type: none"> The community and government support combined with the high proportion of protected land in the watershed make an investment in this watershed a good risk for durability and significance of benefits. <p>CEQA: 15262. Feasibility and Planning Studies</p>	94.0	Yes

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011	Planning	California Invasive Plant Council (Cal-IPC)	Central Valley Arundo Mapping and Impact Assessment Project	All counties in Central Valley	<ul style="list-style-type: none"> WCB funds would be directed towards the mapping of infestations, analyzing impacts, site prioritization, and building partnerships to eradicate Arundo donax (giant reed) in Central Valley watersheds, an area in excess of 14 million acres in size. To implement top-down control, a complete mapping of the plant in invaded areas must occur. This type of planning project— mapping, impact analysis, prioritization and program preparation—has already been accomplished for coastal watersheds from Monterey to Mexico by Cal-IPC. This demonstrates that the project is feasible as it has already been completed for an area of comparable size in California. The plan will complete a prioritization of watersheds to assist programs in initiating work where there will be the most benefit. There are many separate watersheds that feed into the Central Valley watersheds. It is the ultimate goal of this project to eradicate Arundo in the Central Valley, as this will protect the Delta Region, which is already initiating its own mapping, prioritization and control program. This work in the Delta will be far more sustainable if upstream Arundo sources are eliminated. 	<ul style="list-style-type: none"> An acre of Arundo uses 24 acre feet per year per acre compared to native vegetation that uses an average of 4 acre feet per year per acre. A net water gain of 20 acre feet per year per acre is realized for every acre of Arundo that is permanently removed from a watershed. Systematic eradication of Arundo also restores fluvial processes and riparian habitat, reduces flooding and erosion, and lowers fire risk. This planning project will complete a prioritization of watersheds to implement Arundo eradication projects where there will be the most benefit. 	\$438,889.00	\$643,556.00	<ul style="list-style-type: none"> Removing Arundo has the potential to improve flows, and make a big impact. Prioritizing critical reaches is needed given the extent of the Arundo problem in the Central Valley <p>CEQA: 15262. Feasibility and Planning Studies</p>	93.5	Yes
048	Planning	American Rivers	Oroville Wildlife Area Floodplain Reconnection and Habitat	Butte	<ul style="list-style-type: none"> This grant request is for a portion of the preliminary project: a bathymetry survey and the design of interior channel improvements and a new berm. Project objective includes the design and permitting for civil improvements for floodplain reconnection on the "D" Unit (160 acres) of the Oroville Wildlife Area. 	<ul style="list-style-type: none"> Increase hyporheic recharge and discharge: Hyporheic discharge to the river will cool stream temperatures. 	\$825,897.00	\$835,897.00	<ul style="list-style-type: none"> Proposed project site is very significant to spring-run Chinook salmon, steelhead, and other anadromous fish. The overall project should enhance stream flow primarily by improving water timing (hydrograph), quality and temperature in the adjacent Feather River and increasing the active floodplain of the river which will add significant acreage of terrestrial and aquatic habitat. <p>CEQA: 15262. Feasibility and Planning Studies</p>	93.3	Yes
012	Planning	Smith River Rancheria	Dominie Creek and Rowdy Creek Fish Passage Improvement Project	Del Norte	<ul style="list-style-type: none"> WCB funds would lead to the designing of fish passage improvements at the confluence of Dominie Creek and Rowdy Creek through the removal of water diversion infrastructure and other outdated hatchery infrastructure. Project development would draft technical specifications and predict probable construction costs. There are 1.6 miles of habitat upstream of the hatchery on Dominie Creek and 11.5 miles of habitat upstream of Rowdy Creek. Hatchery infrastructure currently inhibits fish passage for native anadromous species including coho salmon, Chinook salmon, steelhead trout, rainbow trout, coastal cutthroat trout, and pacific lamprey in addition to many other aquatic species. 	<ul style="list-style-type: none"> This planning project will address water efficiencies and alternatives for hatchery operation with a focus towards increasing the water available in Dominie Creek at crucial life stages of salmonids. Eventual cessation of the water diversion on Dominie Creek is predicted to return 2.2 cubic feet per second, substantially increasing base flows. 	\$399,589.00	\$486,274.00	<ul style="list-style-type: none"> Rowdy Creek Hatchery has been a great partner in previous endeavors. The hatchery has old infrastructure that would benefit from improvement. These rivers are part of the Smith River complex which is a cold water refugia, and area would benefit from barrier removal. Rowdy and Dominie Creek fish passage obstructions rank among the highest priorities within California Department of Fish and Wildlife (CDFW) Northern Region's Fish Passage Priority list. Improving these outdated obstructions in these 2 coho salmon creeks, as well as improving stream flows/water quality is and has been a priority for CDFW for many years. <p>CEQA: 15262. Feasibility and Planning Studies</p>	92.7	Yes
067	Planning	California Land Stewardship Institute (CLSI)	Suisun Creek Watershed Instream Flow Enhancement Project	Napa	<ul style="list-style-type: none"> Complete the scientific studies and analyses necessary to re-operate Lake Curry for the benefit of threatened steelhead trout in Suisun Creek. Monitor water temperatures, dissolved oxygen and stream flow in Suisun Creek with different reservoir operation scenarios to determine the optimal releases for salmonids under various climatic conditions. Analyses of several alternatives for the lake will be completed including cost evaluation of the reservoir and the water right as it stands currently; with a relocated point of diversion and winter time diversion into the Putah South Canal; and as a salmonid mitigation bank and source of freshwater to Suisun Marsh. A committee of resource agencies, local residents, fish enthusiasts, City of Vallejo and elected officials will review results of the studies and provide feedback. 	<ul style="list-style-type: none"> The project will enhance stream flows by optimizing water releases out of Lake Curry and developing a long term management program for Lake Curry to be dedicated to providing cold water for threatened steelhead trout. The information can be used to increase releases from Lake Curry from 1 cfs to 6-8 cfs. 	\$584,100.00	\$624,100.00	<ul style="list-style-type: none"> The project information, including a feasibility study to evaluate alternatives for the disposition of Lake Curry, would serve to ultimately change the use of a municipal reservoir to benefit salmonids over the long term. <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.7	Yes

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019	Planning	Trout Unlimited	Dry Meadow Restoration Project	Tulare	<ul style="list-style-type: none"> Applicant is requesting funds from WCB for permitting and environmental compliance. Tasks and associated deliverables for this phase include: (1) completion of the CEQA/NEPA analysis with published decision documentation and (2) application and acquisition of the necessary permits for in-channel work from the Army Corps of Engineers and Central Valley Regional Water Quality Control Board. The project site is an identified degraded montane meadow habitat located in the southern Sierra Nevada, Sequoia National Forest. The project ultimately leads to meadow restoration, and past meadow restoration projects have demonstrated as much as a 30% increase in water storage capacity (Kavvas et al. 1994, Plumas Corporation 2006; Flint et al., 2004). Through restoration, this meadow will be reconnected to groundwater, which usually results in reduced water temperatures in summer (Loheid and Gohelick 2006). In addition, decreased temperature and increased hyporheic exchange with the floodplain should result in higher dissolved oxygen levels. Reconnecting the meadow with the floodplain will reduce erosion and sediment delivery (Kavvas et al. 1994). This project will ultimately enhance Bull Run Creek, a tributary to the North Fork Kern River. 	<ul style="list-style-type: none"> The deep and extensive eroded gully systems have created a disconnect between surface and subsurface water flow and allows for rapid winter and spring runoff (increased peak flood events) and decreased groundwater storage. The results are reduced overall meadow water storage and late season instream flow. Project implementation will improve water quality, late-season water quantity, and available aquatic habitat. 	\$94,635.00	\$155,363.00	<ul style="list-style-type: none"> Strong regional support for project and likely to benefit mountain yellow legged frog, southwestern willow flycatcher, and within range of the Kern River rainbow trout A project with a small cost in return for important benefits. As part of a much larger effort both at this site and regionally, the funding of this portion of the process will be very important for a lot of other related activity. <p>CEQA: 15262. Feasibility and Planning Studies</p>	90.7	Yes
002	Planning	Central Coast Salmon Enhancement	Baseflow Monitoring for Stream Flow Enhancement Project Planning and Evaluation in San Luis Obispo County	San Luis Obispo	<ul style="list-style-type: none"> This project will develop a county-wide base-flow monitoring project in San Luis Obispo County. The goal of the project is to measure spring and summer base flows in reaches identified with a high potential for steelhead rearing by NOAA (Boughton and Goslin, 2006) and determine which streams are meeting environmental water demand (EWD) and which are not. Additionally, funds would enable effectiveness monitoring on a completed streamflow enhancement project on Pennington Creek (four 74,000-gallon rainwater harvesting tanks) and to collect pre-implementation data needed for evaluation on San Luis Obispo Creek (repurposing an existing 2,000,0000 gallon rainwater cistern for streamflow enhancement). 	<ul style="list-style-type: none"> This base-flow monitoring project will inform and provide the foundation for future stream enhancement projects and provide the data necessary to prioritize future forbearance efforts with private and public landowners. 	\$180,701.18	\$193,436.19	<ul style="list-style-type: none"> There is limited information pertaining to steelhead restoration in SLO and Monterey County. Information resulting from project would be beneficial. <p>CEQA: 15262. Feasibility and Planning Studies</p>	89.7	Yes
016	Planning	San Mateo County Resource Conservation District	Domestic and Agricultural Water Efficiency Design Program	San Mateo	<ul style="list-style-type: none"> The San Mateo County Resource Conservation District (RCD) and its partners Trout Unlimited (TU), American Rivers (AR) and the USDA Natural Resources Conservation Service (NRCS) are working to enhance and protect stream flows through planning, designing, permitting and implementing water conservation projects on domestic, recreational and agricultural water systems within the Pescadero-Butano Watershed. WCB planning funds would be used to complete water audits to determine the amount of water being lost due to leaking pipes, toilets, sinks, water storage units, etc. and provide designs and technical assistance to make the needed facility improvements resulting in the saving of thousands of gallons of water annually. 	<ul style="list-style-type: none"> These projects improve efficiencies of water irrigation and supply infrastructure, effectively reducing overall water use and increasing storage of winter flows to maximize the reduction in surface water withdrawals during the late summer and early fall when streamflow is lowest. The minimum estimated increase in water storage capacity and water savings that can be achieved by the RCD and its partners from 2012 through 2018 totals 68 Acre Feet (AF) of water storage and 178 AF of water conservation. 	\$828,357.00	\$1,057,865.00	<ul style="list-style-type: none"> Significance of benefits will be quantified through water audits Project success depends on forbearance agreements being executed between RCD, TU, and landowner. Proposal does not articulate landowners willingness to sign forbearance agreement. Targeted streams include the Pescadero and Butano Creek <p>CEQA: 15262. Feasibility and Planning Studies</p>	87.0	Yes

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58	Planning	National Fish and Wildlife Foundation	Flow Enhancement Program Administration, Leadership and Management	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. <ul style="list-style-type: none"> This task covers the funding for NFWF to establish, develop, administer and manage the five distinct projects brought forth by the NFWF proposal. 	<ul style="list-style-type: none"> This task is the oversight portion of the proposal. It will not enhance flow alone, but the various projects completed will lead to flow enhancement. 	\$150,000.00	\$296,874.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed. Task 1 funds the coordination for all projects, both planning and acquisition, under this proposal. Selection Panel suggests funding a portion of the requested task 1 funds to cover admin costs only for tasks approved under the proposal <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.67* * Project 58 is composed of 6 individual projects. The proposal was scored as a whole, but individual projects were recommended on a project-by-project basis.	Partial - \$110,369.82
	Planning		Grenada Irrigation District Planning for Piping of an Open Ditch (GID)	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. This proposal is one of the five distinct projects. <ul style="list-style-type: none"> This task is planning proposal which aims to complete the design and engineering of a pipeline to replace a deficient canal as well as permit and approvals for a future water conservation plan. 	<ul style="list-style-type: none"> The planning project will identify ways in which GID could reduce inefficiencies. 	\$191,200.00	\$221,200.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed. CDFW supports a pipeline to replace the ditch. <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.67*	Yes
	Planning		Developing Flow Enhancement Projects on French Creek (Siskiyou RCD)	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. This proposal is one of the five distinct projects. <ul style="list-style-type: none"> The RCD has coordinated with three French Creek water-users interested in improving water conveyance and on-farm efficiencies to identify potential water conservation projects. This program includes the assessment of water efficiency improvements from the point of diversion to the point of use, the development of design alternatives and the evaluation of the effect of potential flow enhancements on water quality and quantity. 	<ul style="list-style-type: none"> The completion of these assessments are necessary to enable subsequent implementation of water conservation efforts that will reduce transmission losses and inefficiencies. The resulting net savings will be dedicated in-stream through a forbearance agreement, thus enhancing flows in French Creek. 	\$75,757.00	\$97,876.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed Teaming up with an engineer to come up with alternatives would be valuable <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.67*	Yes
	Acquisition		Spencer Ranch Permanent Instream Water Dedication and Conservation Easement	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. This proposal is one of the five distinct projects. <ul style="list-style-type: none"> This project requests funding to complete the purchase of a 0.76 cubic feet per second permanent instream water dedication on French Creek and a 250 acre conservation easement on the Spencer Ranch. 	<ul style="list-style-type: none"> Spencer Ranch Permanent Instream Water Dedication and Conservation Easement will dedicate water instream. 	\$558,250.00	\$1,490,500.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed. Acquiring a permanent instream right supported by a Water Code Section 1707 Instream dedication would be very valuable in this system <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	91.67*	Yes
	Planning		Scott River Farmer's Ditch Efficiency Study (CalTrout and Siskiyou RCD)	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. This proposal is one of the five distinct projects. <ul style="list-style-type: none"> This project will provide the Ditch Company technical and financial assistance from the RCD to restore permanent diversion infrastructure that will improve water delivery and efficiency. Additionally, California Trout will coordinate an on-farm irrigation efficiency study. 	<ul style="list-style-type: none"> This planning study will lead to implementation projects which will reduce inefficiencies on farms and at points of delivery and points of diversion. 	\$377,863.00	\$421,326.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed. Although the independent reviewers scored this project high, during selection panel discussions it was decided that although diversion improvement designs and irrigation efficiency options provided by this project will allow for increased flow, the flow enhancements are not quantified. Insufficient funds in planning account. <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.67*	No
	Planning		Little Shasta River Flow Enhancement Project Phase 1 (TNC)	Siskiyou	A diverse coalition of groups have joined together to develop and submit a unified proposal for funding to WCB through the National Fish and Wildlife Foundation (NFWF) for a suite of projects that include a flow enhancement acquisition, and four planning projects in the Scott and Shasta watersheds of the Klamath Basin. This proposal is one of the five distinct projects. <ul style="list-style-type: none"> The primary objective of this task is to conduct the necessary planning, engineering design for future implementation projects that will enhance flows in the Little Shasta River. Funding will be focused on two ranches located in the Little Shasta River. 	<ul style="list-style-type: none"> This project will conduct the necessary planning and engineering design for future implementation of projects that will enhance flows in the Little Shasta River. 	\$147,967.00	\$205,698.00	<ul style="list-style-type: none"> The need to enhance flow on the Shasta and Scott is undisputed. It is unclear if other landowners on Little Shasta River are in agreement with the proposal. Although the independent reviewers scored this project high, during selection panel discussions it was decided that the quantifiable amount of water dedication is not precise. Insufficient funds in planning account. <p>CEQA: 15262. Feasibility and Planning Studies</p>	91.67*	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
044	Acquisition	The Trust for Public Land	Montesol Ranch Watershed Protection Project	Napa, Lake	<ul style="list-style-type: none"> Acquisition of a perpetual conservation easement over the 7,300-acre Montesol Ranch, a watershed property in the upper Putah Creek and Pope Creek watersheds of Napa and Lake Counties, to protect against a land use conversion threat that will impair instream flows to several regionally-significant creeks in the absence of the proposed project. The owners of the property are willing sellers at a price not to exceed fair market value, as set forth in an appraisal, which will be submitted to the Department of General Services. 	<ul style="list-style-type: none"> The proposed project will enhance stream flows from current conditions by extinguishing the right to subdivision, development and vineyard conversion via a perpetual conservation easement. 	\$3,000,000.00	\$11,375,000.00	<ul style="list-style-type: none"> In area that could potentially lose a sizable amount of water if developed. Additionally, area is a watershed with a lot of water needs, and is in an environment which is likely to become drier with climate change. Funding this project will halt future subdivision and development. Napa River is likely an area where we are going to see more future funding for anadromous fish. Although the independent reviewers scored this project high, during selection panel discussions it was decided that while this project could prevent future water losses as a result of potential development, it would maintain status quo and not result in enhanced flow. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	103.0	No
003	Acquisition	Western Rivers Conservancy	Blue Creek Salmon Sanctuary	Humboldt, Del Norte	<ul style="list-style-type: none"> Acquisition of 4,600 Blue Creek watershed acres (plus an additional adjacent 1,534 acres) and elimination of industrial timber harvest is proposed for this project The acquired lands will be managed by the Yurok Tribe under a long-term management plan that emphasizes restoration of the land and streams and reversion to mature conifer forest. 	<ul style="list-style-type: none"> Stream flow enhancement based on the hypothesis that forest management geared towards old-forest characteristics and road density reduction will greatly reduce fine sediment contributions and restore groundwater mechanisms needed to improve summer base flow conditions. 	\$3,000,000.00	\$9,900,000.00	<ul style="list-style-type: none"> Blue Creek is not flow impaired. This is a good watershed protection project, but the project is not a good fit for the flow enhancement program. Any forestry related impacts will be mitigated by the Forest Practice Rules. Although the independent reviewers scored this project high, during selection panel discussions it was decided that while this project could prevent future water losses as a result of potential development, it would maintain status quo and not result in enhanced flow. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	97.7	No
034	Acquisition	The Trust for Public Land	Lower Klamath Ecosystem Restoration Project	Humboldt, Del Norte	<ul style="list-style-type: none"> Acquisition of a conservation easement on 24,041 acres of forestland on the Lower Klamath River. The easement will mandate cessation of stream diversions under eight permits, widen and protect riparian buffers, require silvicultural improvements (including basal area retention, retention of early- and late-seral habitat, longer rotations, and a transition to uneven-aged management), and prohibit subdivision and development. The project spans three large Calwater planning watersheds owned by Green Diamond Resources Company: McGarvey, Tarup, and Ah Pah Creeks, including six individual tributary streams. Green Diamond owns all recorded water rights in these watersheds (all pre-1914) and in most cases owns the entire watershed. Phase One of the project is proposed here; later phases are planned to include adjacent watersheds. 	<ul style="list-style-type: none"> Water quality enhancements will stem from altered silvicultural practices as well as enhanced riparian buffers, as required in the proposed conservation easement. 	\$7,000,000.00	\$20,627,129.00	<ul style="list-style-type: none"> Conservation easement (draft) was not provided Proposal is vague regarding amount of water dedicated (tens of thousands), and specific amount of water currently being diverted. Even if the project was funded, there would need to be subsequent follow up projects to restore lands. Any forestry related impacts will be mitigated by the Forest Practice Rules. Although the independent reviewers scored this project high, during selection panel discussions it was decided that while this project could result in altered silvicultural practices, proposal did not make clear the amount of water that would be dedicated to fish and wildlife. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	91.5	No
009	Acquisition	Bear Yuba Land Trust	Deer Creek Meadow and Wildlife Sanctuary Acquisition Project	Nevada	<ul style="list-style-type: none"> This Acquisition project is a partnership between the Bear Yuba Land Trust (BYLT) and Sierra Streams Institute (SSI) WCB funds would be used to acquire and protect 134 acres owned by three private owners. The property is located at the confluence of Deer Creek and Squirrel Creek and includes the only meadow and floodplain in the lower Deer Creek canyon. SSI has partnered with property owners since 2000 to conduct monitoring and restoration at the site. The owners have entered an agreement to sell the property to BYLT Once the property restoration and public access development amenities are underway, BYLT will transfer the property to SSI for fee title ownership and retain a permanent conservation easement on the entire parcel. 	<ul style="list-style-type: none"> After acquisition, future projects could enhance water quality through the re-connection of floodplain restoring the hydrological and geomorphological function in the stream 	\$675,000.00	\$716,750.00	<ul style="list-style-type: none"> Deer creek is very important (essential for spring run recovery along with Clear Creek and Butte). Acquisition in itself does not enhance flow. <p>CEQA: 15313. Acquisition of Lands for Wildlife Conservation Purposes 15325. Transfers of Ownership of Interest In Land to Preserve Existing Natural Conditions and Historical Resources</p>	85.7	No
010	Implementation	Lake County Watershed Protection District	Adobe Creek Conjunctive Use Project	Lake	<ul style="list-style-type: none"> Installation of operable slide gates on the primary spillway structure of Highland Creek Reservoir that would allow the level of the reservoir to be raised 7.5 feet. Two hundred acre-feet of water will be designated for release in the spring to supplement natural flows to improve spawning and rearing conditions for the Clear Lake Hitch. This release will be coordinated with and under the direction of the California Department of Fish and Wildlife (DFW). It is believed these releases will significantly benefit the ClearLake Hitch in years with dry spring weather and flows in Adobe Creek are severely limited, and possibly non-existent. Seven hundred acre-feet of water will be released in late spring, summer and fall to recharge ground water on the western side of Big Valley. This is approximately 19% of the annual consumptive use of ground water in the area of Big Valley directly benefited by the Project. 	<ul style="list-style-type: none"> The project will capture high flows during the late winter and hold them for release in spring and summer. Two hundred acre-feet is designated to supplement spawning and rearing flows for the Clear Lake Hitch. Flows will be adaptively managed based on data gathered for optimal flow for the Clear Lake Hitch 	\$556,750.00	\$985,650.00	<ul style="list-style-type: none"> Has the potential to be a strong project since the Clear Lake Hitch is endemic. Project proponent has sufficient resources proposed for future long-term monitoring efforts and intends to coordinate/confer with CDFW staff and local stakeholders. <p>CEQA was unclear</p>	99.8	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
051	Implementation	American Rivers	Pine Creek Restoration Project	Lassen	This comprehensive project will enhance streamflow and habitat for Eagle Lake Rainbow Trout (ELRT) through the following actions: <ul style="list-style-type: none"> Remove impoundments, including dug out waterholes and railroad grades, in the Pine Creek watershed that reduce flow volumes and alter the timing of flows in Pine Creek). Cap diversion from Bogard Spring and dedicate the existing water right to instream flow. Remove conifers that are withdrawing water from meadows through evapotranspiration in the Pine Creek watershed. Install stream gauges above and below the project area to quantify changes in the timing and duration of flows that result from these and planned future restoration activities. 	• Project would eliminate diversions from Bogard Spring and dedicate that water to instream flow.	\$1,066,000.00	\$1,469,800.00	• After completing reviews it became apparent that CEQA was not complete	92.5	No
037	Implementation	Solano Land Trust	Lynch Canyon Tower Road Project	Solano	The project intends to: <ul style="list-style-type: none"> Restore a massive scour that will re-grade the stream bottom and slopes and install a cross-vane structure on the Middle Fork of Lynch Creek, Solano County. The vane will be constructed of boulders and placed in steps allowing the flow to dissipate energy with each step from below road culverts to an adjusted creek grade. Each step will provide small pools as instream habitat for California red-legged frog, other amphibians, mammals and birds. The site is partially enclosed by existing riparian fencing which excludes cattle; additional exclusion fencing to manage cattle grazing at the site is part of this project. 	•The project will enhance flow through channel stabilization	\$93,982.00	\$105,794.00	• Although the independent reviewers scored this project high, during selection panel discussions it was decided that while sediment distribution will change, and creating more steep pools to potentially create more habitat for red-legged frogs would be beneficial, it is unclear how this project enhances flow. <ul style="list-style-type: none"> CEQA was unclear 	90.3	No
015	Implementation	Sierra Streams Institute	Deer Creek Streamflow Enhancement and Restoration Project	Nevada	• Sierra Streams Institute (SSI) is working with Lake Wildwood Association (LWA) and others to better manage water released from the LWA reservoir to enhance stream water quality and flows. <ul style="list-style-type: none"> WCB funds would contribute to an implementation process with three primary tasks: (1) The first task would be related to stream flow releases based on hydrographs built for different factors to include dredging needs, climate change, drought, and overall watershed health and function. (2) The second task would focus on better management of dredged materials that are trapped behind the dam to be placed below the reservoir so gravels may continue to migrate down to critical spawning habitat. (3) The third major task will be continual monitoring of the two above tasks to evaluate the success of each release so that the information can be used to modify existing hydrographs to adaptively manage for future flow releases and share these findings to enhance other watershed adaptation projects in order to reduce the impacts of climate change on California's communities and ecosystems. 	• Project intends to coordinate with the Lake Wildwood Association to release flows from a reservoir to meet biological needs downstream.	\$126,917.60	\$465,941.94	• Applicant did not provide evidence of an agreement with Lake Wildwood. Therefore, likely success of the project is uncertain. <ul style="list-style-type: none"> CEQA was unclear 	85.3	No
053	Implementation	Dry Creek Rancheria Band of Pomo Indians	Rancheria Creek Restoration Project	Sonoma	The proposed restoration activities along the Rancheria Creek include <ul style="list-style-type: none"> Excavating flood plain benches in the incised channel to restore floodplain function and hydrology conditions Channel realignment to restore habitat complexity in the channelized reach of the creek Planting of riparian vegetation along the channelized portion of the creek to create cover to shade the creek and create a riparian buffer from the existing vineyard operations Construction of off stream storage to augment flow during the summer months, culvert replacement and design, and installation and development of rating curves for flow gages in Rancheria Creek. 	• Flow augmentation from the off stream storage tank will restore flow to the creek during the critical summer period for steelhead and Coho	\$2,695,440.00	\$3,270,440.00	• This area is likely a sediment impaired watershed, with a disconnected creek. <ul style="list-style-type: none"> Proposal seeks to help reopen area, and potentially make this area usable for fish. CEQA not complete 	85.0	No
027	Planning	American Rivers	Grasslands Floodplain Restoration Project	Merced	• Complete plans, designs, environmental compliance, and permits to breach two levees and reconnect hundreds of acres of floodplain habitat at Great Valley Grasslands State Park (Grasslands) and the neighboring San Luis National Wildlife Refuge.	• Subsurface or hyporheic recharge will reduce water temperatures and marginally increase base flows for weeks after the high flow event subsides.	\$591,989.00	\$1,173,263.00	• California Department of Fish and Wildlife is funding this project CEQA: 15262. Feasibility and Planning Studies	103.7	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
047	Planning	Trout Unlimited	North Coast Flow Enhancement Planning Project	Humboldt County (Redwood Creek and Salmon Creek); Humboldt and Mendocino Counties (Mattole Headwaters)	<ul style="list-style-type: none"> • Create an implementable plan for improving dry season streamflows in two adjacent North Coast watersheds that are crucial to the recovery of threatened and endangered steelhead and salmon: Salmon Creek and Redwood Creek. • Additional planning will be conducted in the Mattole River Headwaters to support ongoing flow enhancement design and implementation. • Examine long-term regional trends to determine the extent to which factors such as climate change and land use patterns are driving dry season low flow conditions. Work will then focus on three sub-basins crucial to salmon and steelhead recovery: Redwood Creek, Salmon Creek, and the Mattole River headwaters. • Water availability analyses and detailed hydrologic modeling will be conducted, and streamflow targets developed in coordination with contemporaneous studies in Sproul Creek and elsewhere. • This technical work will be used to guide siting and design of projects (e.g., storage and forbearance, groundwater recharge, and vegetation management). • In conjunction with landowner outreach, the project will lay the groundwork for implementing site specific projects by: (1) offering support to landowners with the means to upgrade their infrastructure and improve water management practices at their own expense; and (2) creating site-specific designs for the highest-priority projects, as well as plans for implementation funding. 	<ul style="list-style-type: none"> •The project will guide prioritized, site-specific and watershed-scale design and implementation projects that will directly and cumulatively increase dry season flows •Implementation activities may include water storage and forbearance, groundwater recharge, and targeted forest management practices (e.g., selective thinning). 	\$729,994.00	\$1,034,962.00	<ul style="list-style-type: none"> • While there are good concepts in this proposal, some of the details are not clear • Although the independent reviewers scored this project high, during selection panel discussions it was not clear how the creation of new protocols will contribute to those already in existence. <p>CEQA: 15262. Feasibility and Planning Studies</p>	98.3	No
013	Planning	University of California, Merced	Enhancing streamflow and habitat connectivity in the San Joaquin: planning for ecosystem recovery via multi-benefit prioritization	Multiple	<ul style="list-style-type: none"> • Project will collect data to support precision mapping of stream flow and water quality conditions at locations within the San Joaquin watershed known to have high potential for restoration actions. • Funds would also be used to model water delivery which would focus on identifying structural and engineering improvements, and policy improvements (e.g., groundwater buffers for drinking water access in economically disadvantaged communities; safe harbor for riparian and in-stream habitat enhancements) • High resolution bathymetry, water quality, and stream flow metrics will be collected with proven technologies deployed in innovative ways. Particular focus will be applied toward improving opportunities for floodplain connectivity and groundwater recharge, and resulting enhanced streamflow and water quality, in portions of river reaches not yet assessed for project viability. 	<ul style="list-style-type: none"> • Study will provide pre-project baseline data and a prioritization framework for maximizing the multiple benefits of location-specific projects over time • Stream flow enhancements will be demonstrated by quantifying the functional contributions of proposed floodplain projects to streamflow as measured by volume, magnitude, timing, and quality. 	\$449,743.00	\$596,448.00	<ul style="list-style-type: none"> • Although the independent reviewers scored this project high, during selection panel discussions questions remained regarding the value added from results acquired with this limited amount of funding. • Question to how proposal will gather information in sufficient detail to assist with the identification of future stream flow enhancement implementation projects. <p>CEQA: 15262. Feasibility and Planning Studies</p>	92.5	No
022	Planning	The Regents of the University of California (campus: Scripps Institution of Oceanography, UCSD)	Flow and survival studies to support endangered coho recovery in flow impaired tributaries of the Russian River Basin	Sonoma	<ul style="list-style-type: none"> • Project is intended to conduct research to determine which stream flow and related environmental metrics (dissolved oxygen, temperature, wetted volume) best predict summer survival of juvenile coho salmon in small Russian River tributaries and compare these results with flow thresholds derived from habitat-based models. • Additionally, funds would be used to conduct wet/dry mapping surveys in conjunction with snorkeling surveys to document the reduction of wetted habitat available to fish over the summer season in relation to fish distribution and relative abundance. 	<ul style="list-style-type: none"> • Will aid resource managers in identifying, prioritizing, and evaluating stream flow enhancement projects, and improving their management of summer base flows for endangered coho populations in coastal California streams. 	\$1,442,670.00	\$1,759,035.00	<ul style="list-style-type: none"> • Insufficient funds remaining in the planning category to recommend funding this project <p>CEQA: 15262. Feasibility and Planning Studies</p>	90.3	No
063	Planning	California Trout	South Fork Eel River Water Conservation Program	Humboldt	<ul style="list-style-type: none"> • This Project will develop and demonstrate the application of a regional methodology, to prescribe flow objectives for three high priority north coast watersheds - Sproul Creek in the SF Eel River, and Indian and Mill Creeks in the Navarro River. Using Sproul Creek in the South Fork Eel River basin as a pilot watershed to quantify unimpaired water supply and establish instream flow needs, allocate available water supplies among independent water users in a way that cumulatively protects the public trust beneficial uses. • This standardized approach will be regionalized to apply to other watersheds throughout the SF Eel River basin and across the North Coast. 	<ul style="list-style-type: none"> • This planning study would provide data enabling the distribution of available water supplies among users in a way that protects public trust resources. 	\$262,683.00	\$436,454.00	<ul style="list-style-type: none"> • Project would work to establish standard methodologies for permitting and watershed management, but the likelihood that beneficial stream flow will be enhanced as a result of the information contained in this proposal is not clear. • Insufficient funds remaining in the planning category to recommend funding this project. <p>CEQA: 15262. Feasibility and Planning Studies</p>	88.7	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
014	Planning	California Trout	Butte Creek Water Management Plan: Integrating Fish Passage, Floodplain Habitat and Water Management	Sutter	<ul style="list-style-type: none"> Develop a water management plan that would coordinate timing and water use throughout the Butte Creek system in order to improve adult and juvenile migration and juvenile rearing for Sacramento Valley spring-run Chinook salmon and steelhead. The plan and related gaging and monitoring will increase transparency and provide predictability (via access to real-time data and flow forecasts) in operations. This increased predictability will result in increased reliability, flexibility, and efficiency of use of the limited supply of water. 	<ul style="list-style-type: none"> Project will identify flow needs, coordinate water operations, and curtail diversions to support biological benefits. 	\$266,725.00	\$329,125.00	<ul style="list-style-type: none"> A new water management plan is not considered a high priority for the lower Butte Creek system. Insufficient funds remaining in the planning category to recommend funding this project. <p>CEQA: 15262. Feasibility and Planning Studies</p>	88.3	No
049	Planning	Trout Unlimited	Outlet Creek Coho Tributaries Streamflow Stewardship Project	Mendocino	<ul style="list-style-type: none"> Establish a program of effective on-the-ground projects for reducing summer diversions and thereby increasing dry season streamflows for the benefit of coho salmon and steelhead in Ryan, Baechtel, and Broaddus creeks. Tasks would include collecting streamflow data, quantifying existing human water use, identifying alternative sources of water such as wintertime diversion to storage and rainwater harvesting, identifying priority stream reaches, identifying the most promising project types and locations for increasing streamflows, analyzing the necessary permits and approvals for those projects, and forming the necessary relationships with willing landowners. 	<ul style="list-style-type: none"> This planning project will guide the development of implementation projects showing the most promise to enhance flow. 	\$274,590.83	\$328,590.83	<ul style="list-style-type: none"> More elaboration on how the co-benefits are measurable and quantifiable are needed Insufficient funds remaining in the planning category to recommend funding this project <p>CEQA: 15262. Feasibility and Planning Studies</p>	87.7	No
066	Planning	The Nature Conservancy	Stream Flow Enhancement Research for the American River Headwaters Restoration Project	Placer	<ul style="list-style-type: none"> Planning project will determine the effects of the locations, timing and intensities of forest-thinning treatments across the American River Conservancy's (ARC) recently acquired 10,000-acre property for reduction of wildfire risk, more resilient forest conditions, and verify increased snow storage and water yield within five years Develop a replicable and user-friendly analytical model that helps decision makers evaluate the biophysical relationships between forest conditions, forest thinning and enhanced flows across a variety of fire-prone forest types in California. 	<ul style="list-style-type: none"> This study will verify where reduced forest stand density leads to increased snow storage and water yield. 	\$1,509,044.00	\$2,193,227.00	<ul style="list-style-type: none"> Limited detail as to how the proposal will enhance water quantity, timing, and quality. Lacking detail as per the methodology for selecting sites and the scientific monitoring. Insufficient funds remaining in the planning category to recommend funding this project <p>CEQA: 15262. Feasibility and Planning Studies</p>	87.3	No
021	Planning	Humboldt State University Foundation	Fish-Friendly Diversion Node and Network (FFDN) Technology Development	Humboldt and Sonoma	<ul style="list-style-type: none"> Funds are being requested from WCB to develop a system that evaluates how a proposed water diversion, in combination with existing diversions in a watershed, may affect instream flows needed for the protection of fishery resources. As outlined in the State Water Resources Control Board (SWRCB) Resolution 2013-0035, the system would prescribe protective criteria limiting the season of diversion, establishing minimum bypass flows, and limiting the maximum cumulative rate of diversion from a watershed. It would allow site-specific studies to be conducted to evaluate whether different protective criteria could be applied. The FFDN will alert diverters to the impacts of their diversions on stream stage, water temperature, and aquatic habitat. The data collected by a FFDN will demonstrate that a diverter did or did not withdraw water from a stream when flows are so low that they would cause take of a threatened or endangered species. 	<ul style="list-style-type: none"> By informing diverters that they may or likely will violate environmental laws or regulations, it is safe to assume that some, if not most, will stop or reduce their diversion rate to avoid an enforcement action 	\$325,677.00	\$325,677.00	<ul style="list-style-type: none"> Proposed project is to develop a node network for analyzing and alerting diverters about their impact to stream system via a network. This seems like something that is being approached by several entities right now. Project proponent has Mark West Creek as one of their project site locations without mentioning any partnership with any of the organizations that already collect data and work with water diverters in that watershed as part of the Coho Partnership effort (NOAA, CDFW, RCD, TU, OAEC, Sea Grant, CEMAR) Insufficient funds remaining in the planning category to recommend funding this project <p>CEQA: 15262. Feasibility and Planning Studies</p>	86.0	No
050	Planning	San Jose State University Research Foundation for Central Coast Wetlands Group/Moss Landing Marine Labs	Pajaro River Watershed Assessment to Support Coordinated Project Selection, Location, and Effectiveness Monitoring	Santa Cruz, Monterey, San Benito, Santa Clara	<ul style="list-style-type: none"> This planning project aims to create a comprehensive, interactive watershed information resource that tracks stream ecosystem conditions to help the agencies and organizations in the Pajaro River Watershed make informed watershed and asset management decisions. A portion of WCB funds requested would be utilized to complete a watershed map and assessment. 	<ul style="list-style-type: none"> Stream flow enhancements can be achieved by all counties working together to; identify off channel retention and restoration opportunities, implement storm water management programs, design agricultural best management practices, and coordinate water diversions and groundwater use and recharge. 	\$1,212,462.00	\$3,030,828.00	<ul style="list-style-type: none"> Proposed project outcomes benefiting streamflow (i.e. quantity, timing, or quality) is poorly defined. Project could lead to implementation projects resulting in enhanced flow but primarily water quality improvement potential. Most of the budget seem geared towards elements outside of enhanced streamflow. Insufficient funds remaining in the planning category to recommend funding this project <p>CEQA: 15262. Feasibility and Planning Studies</p>	85.3	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
001	Acquisition	California Rangeland Trust	Bar 11 Ranch Conservation Easement	Shasta	<ul style="list-style-type: none"> WCB funds would acquire a 990-acre conservation easement at the Bar 11 Ranch, Riparian restorations and erosion control projects completed or in process would also be permanently protected. 		\$396,000	\$867,000	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	<85	No
033	Acquisition	Los Cerritos Wetlands Authority (LCWA)	Los Cerritos Wetlands-Bryant Dakin Acquisition	Los Angeles	<ul style="list-style-type: none"> Acquisition of the frontage and remaining Bryant-Dankin LLC parcels located along 2nd Street/Westminster Avenue in the City of Long Beach, totaling approximately 16.54 acres. LCWA received a willing seller letter indicating the owner is willing to sell the two frontage parcels. 		\$1,000,000.00	\$3,500,000.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
026	Acquisition	The Trust for Public Land	Goodrich Creek and Meadows Protection Project	Lassen	<p>The Goodrich Creek and Meadows Protection Project will:</p> <ul style="list-style-type: none"> Preserve, passively restore, and encourage future restoration of approximately 5,000 acres of unique mountain meadows, grassland, wetland, and riparian habitat in the Mountain Meadows Watershed and prevent development on up to 1,800 adjacent forested acres through the development of a conservation easement. Conservation Easement terms, project monitoring, and an unusual collaboration among landowners, land managers, and the conservation community will provide direct and measureable enhancement of stream flows in Goodrich Creek and tributaries by alleviating development pressure, enacting compatible grazing management, and promoting meadow and stream restoration. 		\$5,267,801.00	\$5,775,801.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
039	Implementation	California Rice Commission	Management of Rice Fields to Enhance Instream Flows and Provide Multiple Ecosystem, Water Supply, and Flood Management Benefits	Colusa, Yolo	<ul style="list-style-type: none"> This two-year pilot project will quantify benefits to instream flows, ecosystem conditions, agriculture, water supply, and flood management resulting from peak flow diversion, shallow floodplain inundation, and floodplain rice-land drainage return flow. This project will alter flows in the Sacramento River during peak flow conditions between late-fall and early-spring to inundate approximately 5,000 acres of rice fields in Reclamation District No. 108 (RD 108). Diverted water will be held for several weeks after each peak flow event before being drained back to the Sacramento River to enhance instream flow conditions for a wide range of fish and wildlife species. WCB funds will be used to provide incentive payments, water and delivery costs, and planning and technical analyses to quantify benefits. 		\$1,361,765.86	\$1,530,223.86	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
076	Implementation	City of Saint Helena	Upper York Creek Dam Removal & Ecosystem Restoration Project	Napa	<ul style="list-style-type: none"> Remove the 50-foot high earthen dam and re-establish a natural channel and riparian forest through the dam and reservoir area. Once the dam and sediments in the reservoir are removed, a channel will be constructed through the 0.23-mile long project reach. A guiding project goal for the proposed design is to create a restored channel that functions similarly to the less anthropogenically altered natural channel up- and downstream of the dam. 		\$1,500,000.00	\$5,487,474.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

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031	Implementation	Immaculate Heart Community/La Casa de Maria Retreat and Conference Center	La Casa de Maria Instream Flow Enhancement and Water Conservation Project	Santa Barbara	<p>Project intends to:</p> <ul style="list-style-type: none"> •Offset existing agricultural irrigation, landscaping, and toilet use through capture and reuse of up to 800,000 gallons through onsite rainwater reuse and irrigation conservation. • Dedicate this increment of water to instream flow up to 0.68 cfs during summer to augment base flows in San Ysidro Creek. •LCDM is committing to local and regional outreach and education on the anticipated success and lessons learned from monitoring. •LCDM will specially host six outreach events on location for both the immediate local community as well as for the broader South-Central Coast community (San Luis Obispo, Santa Barbara, and Ventura Counties). These workshops will highlight the blend of water conservation best practices, promote Water Code Section 1707 Instream Dedication and instream flow tools, as well as focus on the species of concern. In addition, LCDM will develop on-site interpretive signage, which will further educate the 12,000+ retreat visitors each year. 		\$813,827.00	\$1,038,221.00	• Scored below 85 point cutoff after review process	< 85	No
032	Implementation	Lassen Land and Trails Trust	Lassen Creek Riparian Restoration Project	Lassen	<ul style="list-style-type: none"> • Restore riparian shrubs and trees on approximately 0.9 mile (+/- 4,600 feet of channel) of two drainages of Lassen Creek, a tributary of the Susan River. • The objective of the project is to establish riparian vegetation (site A) and to enhance and increase the structural and species diversity of existing riparian vegetation (site B). The primary measures of success will be changes in vegetation and increased species richness and diversity at each site. • Water will be pumped from two existing wells at each site by solar powered pumps and be delivered via gravity feed to establish planting between May through October of each year. 		\$75,789.00	\$75,789.00	• Scored below 85 point cutoff after review process	< 85	No
046	Implementation	Natomas Central Mutual Water Company	NDC Lift Pump Station	Sutter	<ul style="list-style-type: none"> • Project will construct a new tailwater recovery pump station with 120 cubic feet per second (cfs) capacity near the head of NMWC's largest point of diversion, the Sankey Diversion, with 434 cfs capacity. • Funds received would be used for materials and contractual work including installation of two lift pumps. 		\$1,171,800.00	\$1,674,000.00	• Scored below 85 point cutoff after review process	< 85	No
071	Implementation	River Partners	Rancho Breisgau Riparian Habitat Restoration Project	Shasta and Tehama	<ul style="list-style-type: none"> • Restore and enhance riparian vegetation on approximately 306 acres of riverside floodplain. • This project is the first phase of a multi-phase effort to restore riparian habitat on the entire Rancho Breisgau property. 		\$2,979,319.00	\$3,268,208.00	•Scored below 85 point cutoff after review process	< 85	No
043	Implementation	Round Valley Indian Tribes	Mill Creek Stream Restoration and Riparian Corridor Development	Mendocino	<ul style="list-style-type: none"> • Combine two effective methodologies that will work together to improve the hydraulic function of Mill Creek while improving habitat diversity and stream bank stability. Plant thousands of trees and vegetation along stream banks to develop a functional riparian corridor to "hold the work together". • The Stream Restoration component will utilize bioengineered boulder rip rap to armor ~ 900 feet of exposed stream bank to prevent approximately 1,500 tons of sediment (per year) from entering this salmonid bearing stream. Boulder and root wad scour pools will be developed in at least 8 different locations to provide and improve vital habitat for salmonid spawning and rearing use. • The second component, Riparian Corridor Development, will involve planting and watering 10,000 trees and shrubs annually (for the life of WCB Grant, ~ 4 years) along the banks of Mill Creek. 		\$1,044,406.00	\$1,764,164.00	•Scored below 85 point cutoff after review process	< 85	No

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ID	Category	Applicant	Project Title	County	Project Description	Applicants' Description of How the Project will Enhance Stream Flow	Requested Funds	Total Funds	Reviewer Considerations / Comments	Avg. Score	Recommendation
065	Implementation	Trout Unlimited	Squaw Creek Meadow Restoration	Placer	<ul style="list-style-type: none"> Construct a high profile and large scale meadow restoration project in Olympic Valley, CA Restoration project will be implemented in a series of construction, monitoring, design and feedback phases over a series of years. Incorporate Total Maximum Daily Load implementation measures to reduce sedimentation of alluvial channel erosion and reduce the impacts from upstream sediment sources by providing natural sequestration functions. Provide educational and volunteer opportunities in a highly visible, highly used recreational corridor. 		\$409,442.46	\$2,819,114.46	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
007	Implementation	Trout Unlimited	Coastal Storage Implementation Rebate Program	Multiple	<ul style="list-style-type: none"> A rebate program would be developed with WCB funds to award up to \$3 million of implementation funding to selected projects for which planning, design, permitting, and CEQA compliance have been completed, and which fall within specified watersheds identified as high priority in state and federal recovery plans. Funding would be distributed several times a year via a grant cycle created and overseen by a technical advisory group consisting of NGO and agency partners. 		\$3,028,262.40	\$3,077,892.40	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
073	Implementation	Truckee River Watershed Council (TRWC)	Truckee River Flow Enhancement	Placer, Nevada, and Sierra	<p>The goal of the Truckee River Flow Enhancement project is to improve flow regimes in the Truckee River watershed to benefit fish and wildlife resources, including the federally listed Lahontan cutthroat trout.</p> <ul style="list-style-type: none"> Provide modeling support to the State of California for flow requests made under the Truckee River Operating Agreement (TROA). TRWC will achieve this by sub-contracting with Trout Unlimited for fisheries expertise and Balance Hydrologics to provide additional RiverWare modeling and analysis. TRWC will coordinate with California Department of Fish and Wildlife to make requests to Department of Water Rights to incorporate the modeling results into monthly scheduling requests to the TROA administrator. 		\$359,142.00	\$386,986.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
075	Planning	California Land Stewardship Institute (CLSI)	Upper Napa River Sediment Reduction and Habitat Enhancement Project	Napa	<ul style="list-style-type: none"> Complete final design and permitting of a series of 26 projects to widen the Napa River channel, create floodplains, create secondary channels and revegetate large areas with riparian forest. 		\$723,745.00	\$758,745.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No

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036	Planning	Center for Ecosystem Management and Restoration	Lower Mill Creek Streamflow Enhancement Evaluation Study	Sonoma	<ul style="list-style-type: none"> Project proposes a monitoring study to document streamflow, and surface water and groundwater levels in the lower reach of Mill Creek to determine whether streamflow enhancement projects can benefit habitat for over summering juvenile salmonids in this reach. This study aims to provide the scientific understanding on the reach's surface water-groundwater relationship. Chart the presence of surface water through the reach and groundwater levels at four wells approximately biweekly to determine where and how long pools are present, and the relationship between surface and groundwater levels through each dry season. Operate two streamflow gauges and measure streamflow monthly to determine when and where lower Mill Creek is gaining or losing water to the adjacent aquifer. 		\$83,165.23	\$106,372.23	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
008	Planning	Deer Creek Watershed Conservancy	DCWC Lower Deer Creek Flood and Ecological Improvement Project, Phase 1	Tehama	<ul style="list-style-type: none"> The planning and environmental review phase for a series of sub-projects would be carried out with WCB funding, including: <ol style="list-style-type: none"> improving levees by reshaping existing structure, restoring appropriate vegetation, and particularly setting-back existing levees to increase the acreage of floodplain to be inundated, improve post-flood water temperatures and quality by enhancing hyporheic (subsurface) flow, and recharge the aquifers associated with Deer Creek; acquire conservation easements on properties affected by restoration to ensure permanence of improvements; investigate the opportunities to improve water use efficiency, and to facilitate natural flows for fish, other ecological considerations and floodwater passage through modifications to the existing diversion dam, and to implement them; and modify the floodway corridor to improve the stream flow characteristics (capacity, velocity, and direction) to carry design flood flows and enhance ecological habitats. 		\$2,300,000.00	\$4,429,000.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
074	Planning	Friends of the Eel River	Upper Eel River Gauging Project	Mendocino and Lake	<ul style="list-style-type: none"> Install five stream gauges in the Upper Eel River Watershed to provide watershed hydrologic knowledge to support threatened anadromous fish, assess the impacts of climate change, and allocate resources for infrastructure (e.g., gauges) for evaluating streamflow conditions. 		\$324,564.00	\$388,795.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
077	Planning	Hoopa Valley Tribe	Weaver Creek Salmonid Instream Flow Assessment	Trinity	<ul style="list-style-type: none"> Identify instream flow thresholds which can inform improved instream flow management to meet habitat requirements for various salmonid life history needs, with emphasis on listed coho salmon, in Weaver Creek over a range of water year types Develop implementable operational management scenarios in coordination with the Weaverville Community Service District and in cooperation with California Department of Fish and Wildlife and the State Water Resources Control Board. 		\$177,553.00	\$177,553.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No

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038	Planning	Humboldt Bay Municipal Water District	Mad River Streamflow Enhancement Study	Humboldt	<ul style="list-style-type: none"> The Humboldt Bay Municipal Water District (HBMWD) has up to 56,000 acre-feet of water available under its water rights on the Mad River to dedicate to streamflow enhancement. This project consists of the collection and analysis of water quality, flow and habitat data in the lower Mad River and its estuary, and the development of a hydrologic model that will be used to evaluate various flow conditions and projected sea level rise. The result of the project will be a recommended flow regime beyond the minimum requirements of the regulations that govern HBMWD's operations that will maximize the benefits of the available water to the ecosystem of the Mad River. This information will provide the basis for an instream flow dedication that HBMWD can pursue as a modification to its water rights. 		\$358,259.00	\$430,941.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process. 	< 85	No
017	Planning	Intelligent Ecosystems Institute (IEI)	Advanced Technological Tools for Stream Flow and Floodplain Habitat Planning, Implementation, and Monitoring	Entire Central Valley	<ul style="list-style-type: none"> Develop a model based on organized and integrated data collected from various sources on water and aquatic ecosystems in the Central Valley (CV). The model would facilitate planning and effectiveness monitoring of current and future instream flow and aquatic ecosystem enhancement projects in the CV. Additionally, it would deliver integrated data along with analysis and visualization tools around the large body of Central Valley Project Improvement Act fisheries, stream flow, habitat, water quality, and related environmental data. The model would also integrate all new streamflow data collected during the first year of any other project funded through this program as a demonstration of the potential of open and integrated data and tools. This work will also help prioritize future stream flow gauging needs by clearly visualizing important data and information gaps around flow. 		\$330,000.00	\$350,000.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
005	Planning	Monterey Peninsula Water Management District	Carmel River Instream Flow Study	Monterey	<ul style="list-style-type: none"> Project will conduct data collection and development a hydraulic model for a 24-mile portion of the Carmel River downstream of the Los Padres Dam. Funds would also be applied to habitat suitability modeling to establish an appropriate set of instream flow requirements necessary for adult upstream migration 		\$350,000.00	\$500,000.00	<ul style="list-style-type: none"> Scored below the 85 point cutoff after review process 	< 85	No
059	Planning	Plumas Corporation	Sierra Meadow Hydrology Monitoring	Tulare	<ul style="list-style-type: none"> Long term monitoring program that addresses the role of mountain meadows in managing the flow of water from these landscapes. A suite of meadows that are expected to be restored in the next 2 years would be selected to represent a range of watershed characteristics. It is expected that this effort will provide one or more years of pre-project data and extended post project data. 		\$610,517.00	\$1,264,731.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
068	Planning	Regents of the University of California	The influence of stream flow on juvenile Chinook salmon migration timing and survival in the San Joaquin basin	San Joaquin	<ul style="list-style-type: none"> To determine which phenotype(s) were most successful during the recent drought, use otolith strontium isotopes to reconstruct the outmigration strategies of returning adults (i.e. "survivors") that were born in the Stanislaus River Cohort- and phenotype-specific survival rates will be compared among ten cohorts (1999-2000, 2003-04, 2008-09, 2011-14) to better understand the effects of flow (including drought flows) on salmon life history diversity, migration patterns and survival, one of the Delta Plan Interagency Implementation Committee (DPIIC)-endorsed actions of the California Water Action Plan (CWAP). Analyze otolith isotopes and microstructure (increment counts and widths) in juveniles captured entering the Delta at Mossdale Crossing to estimate (1) the relative contributions of the three upstream tributaries (Stanislaus, Tuolumne and Merced Rivers), and (2) the date at outmigration and habitat-specific growth rates. Using these data, we will model the biological (e.g. growth, size) vs. physical (e.g. flow, temperature) variables cuing their "decision" to out-migrate. For the 2014 out-migration cohort, compare the growth rates of the adults returning to the Stanislaus River to those expressed by the Stanislaus-origin juveniles captured at Mossdale to identify potential growth- and/or size-selective mortality (after Woodson et al. 2014). 		\$405,572.00	\$1,067,453.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No

Table 3: Wildlife Conservation Board Stream Flow Enhancement Program FY 2015/16, Summary

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078	Planning	Salton Sea Authority with Imperial Irrigation District (IID)	Wetland Performance Evaluation for Enhancing Streamflow Quality in the New and Alamo Rivers	Imperial County	<ul style="list-style-type: none"> In order to identify the most effective approach to the construction of treatment wetlands in future restoration work, existing and newly generated data from three wetlands will be evaluated to better understand the quality of water flowing into the Salton Sea issues. 		\$460,000.00	\$1,124,787.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
035	Planning	Sonoma County Water Agency	Lower Laguna de Santa Rosa Enhancement Project – Phase 1 Enhancement Plan	Sonoma	<ul style="list-style-type: none"> The focus of this grant is the first phase of a three phase project to enhance water quality and streamflow in Santa Rosa Creek Phase 1 Enhancement Plan: will include gathering information from several existing data sources and historical studies; conducting a hydrology study of the Project area; preparing habitat enhancement project plans to improve water quality and enhance flows during fish migration periods and throughout the summer and early fall months; and California Environmental Quality Act (CEQA) compliance. The Phase 1 Enhancement Plan will provide the detailed information needed to implement Phase 2. 		\$530,800.00	\$777,800.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
024	Planning	Sonoma Resource Conservation District	Flow Availability Analysis for Habitat Enhancement Planning, Mill Creek, Russian River Watershed, CA	Sonoma	<ul style="list-style-type: none"> Perform a comprehensive analysis of the spatial and temporal distribution of flow availability conditions throughout the Mill Creek watershed relative to coho habitat requirements to assist in prioritizing restoration efforts and developing strategies for enhancing summer stream flows Delineate stream reaches that provide the most critical fisheries benefits and the portions of the watershed most critical from a groundwater recharge perspective. Assist in enhancing fish migration by identifying flow depth-based fish passage barriers and recommending targeted flow augmentation projects aimed at removing these barriers. Assist in climate change and drought preparedness and water supply reliability by quantifying the anticipated future changes in water availability and the ramifications for both people and natural ecosystems. 		\$199,322.00	\$199,322.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
029	Planning	The Regents of the University of California, Santa Barbara	Ground and Surface Water Conservation from Large-scale Removal of Invasive Giant Reed (Arundo donax) at the Santa Clara River	Ventura and Los Angeles	<ul style="list-style-type: none"> Conduct a rigorous analysis of plant water use (Arundo vs. key native taxa) from different hydrogeomorphic positions and seasons, and measure local groundwater and soil moisture responses to Arundo removal. These measurements will be conducted for sites currently experiencing Arundo removal and from sites where new removal (80 acres) will be implemented in this project. Data will be used with a hydrologic model developed at the Lawrence Berkeley Lab (TOUGH2; Pruess et al. 2012) to provide robust quantification of groundwater-soil moisture changes caused by plant water use (measured), and to advance a water budget assessment of the relationship between Arundo dominance and water resource conservation for this floodplain. 		\$1,395,000.00	\$2,610,442.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
055	Planning	Trout Unlimited	Russian River Tributary Instream Flow Enhancement & Agricultural Water Storage Planning and Design Project	Sonoma	<ul style="list-style-type: none"> The proposal will accelerate off-stream storage and forbearance projects for agricultural water users in the Russian River watershed that improve dry season flow by generating the information necessary to move to final design and implementation in subsequent years. Five projects identified through this planning request will be designed to measurably enhance streamflow during the dry season in tributaries to the Russian River that agencies have already identified as high priority for flow enhancement efforts and to benefit the over-summer survival of coho salmon and steelhead. The actions are entirely voluntary. The primary deliverable is a vetted package for five projects that includes 35% design and a water rights permitting pathway. 		\$221,640.00	\$298,560.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No
060	Planning	Westside Water District	Sites Reservoir - Defining Ecological Benefits from Coordinated Central Valley Project and State Water Project Operations	Glenn and Colusa	<ul style="list-style-type: none"> Investigate schedules to enhance streamflows during critical low-flow periods by storing and reusing water diverted during high flow events, or as a way of coordinating operations with upstream reservoirs in order to improve ecological use of streamflow. 		\$400,000.00	\$580,000.00	<ul style="list-style-type: none"> Scored below 85 point cutoff after review process 	< 85	No

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064	Planning	Yurok Tribe	South Fork Trinity River (SFTR) Watershed Restoration Planning Project	Trinity and Humboldt	This Planning project will <ul style="list-style-type: none"> Identify priority locations for in-river salmon restoration actions in the SFTR watershed basin to enhance water quality through: <ol style="list-style-type: none"> baseline biological and physical monitoring watershed modeling analysis of historic/current hydraulic and geomorphic conditions NEPA/CEQA environmental compliance development to support future restoration implementation projects on public and private lands. This planning project will lay the foundation for future in-river restoration projects to protect wild chinook, coho, and steelhead salmonid populations. 		\$992,899.00	[blank]	• Scored below 85 point cutoff after review process	< 85	No
057	Planning and Implementation	Upper Salinas-Las Tablas Resource Conservation District	San Luis Obispo County Stream Restoration	San Luis Obispo	• The proposed project will consist of two parts: 1) county-wide Percolation Zone Study which will utilize the methods and results from the Final Technical Memorandum of Percolation Zone Study (Stillwater Sciences 2015) to identify and map key percolation zones in 21 basins recognized by Department of Water Resources in San Luis Obispo County; and 2) Santa Rosa Creek Floodplain Restoration Implementation project which will Reconnect the Santa Rosa Creek Floodplain to the channel using information derived from the study and thereby improve flood risk management, increase fish and wildlife habitat, improve water quality, and enhance water storage through critical migration periods.		\$191,027.00	\$254,587.00	• Scored below 85 point cutoff after review process	< 85	No
030	Implementation	Fall River Resource Conservation District	Hat Creek Enhancement Project	Shasta	Failed administrative review						No
040	Implementation	Santa Barbara County Flood Control and Water Conservation District	Maria Ygnacio Creek Debris Basin Modification Project	Santa Barbara	Failed administrative review						No
004	Planning	California State Parks	Bull Creek Stream Gage Operation	Humboldt	Failed administrative review						No
006	Planning	Trout Unlimited	Debris Dam Evaluation in the Plumas and Tahoe National Forests	Sierra, Plumas, Nevada	Failed administrative review						No
056	Planning and Implementation	Save Auburn Ravine Salmon and Steelhead	Salmon and Steelhead Habitat Restoration on Auburn Ravine	Placer	Failed administrative review						No

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