

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
52	Cache Creek Conservancy	Implementation of the Cache Creek Resources Management Plan	Implementation of projects within the Cache Creek Resources Management Plan (CCRMP) area, located along 15 miles of lower Cache Creek from the Capay Dam to the town of Yolo. The proposed project consists of various phases of activities that meet specific grant requirements such as habitat restoration or enhancement, streambank stabilization, invasive plant removal, monitoring, and/or watershed stewardship through education, workshops, and outreach to landowners.	\$300,000	Implementable Project
53	California Land Stewardship Institute	Invasive Plant Removal in Ulatis Creek	This project will first map out where the Arundo is present on the 17 mile channel of Ulatis Creek, then contact the landowners who own property with Arundo to educate them about the Arundo hazards; then, with their permission, eradicate the plant on their land, and lastly revegetate areas with native trees.	\$500,000	Planning
44	City of Clearlake	City of Clearlake Stormwater Management Plan (SWMP), Storm Drainage and Flood Control Project Proposal	The City of Clearlake Stormwater Management Plan (SWMP) includes development of stormwater management program implementation strategies and actions.	\$400,000	Planning
162	City of Davis	Drainage Channel Feasibility Study	Looking to study feasibility to enhance the five separate storm drain conveyance channels to improve evapotranspiration through design improvements. This feasibility study would provide specific ways to improve the design of the existing facilities to improve water quality for the discharges that occur from each channel. The facilities are located Citywide. The study may yield that only one channel is worthy of modification. In particular, the City would like to study the El Macero Drainage Channel in southeast Davis as it is believed to be the channel with that would benefit the most from design improvements. A map can be provided to aid in located each of these drainage channels. If project is developed an educational component can be added.	80,000 for feasibility study	Feasibility Study
163	City of Davis	Retention Pond Feasibility Study	Looking to study feasibility for design enhancements for the seven separate storm drain retention ponds to improve evapotranspiration and water quality in the City's discharge. This feasibility study would provide specific ways to improve the design of the existing facilities to improve water quality for the discharges that occur from each facility. The facilities are located Citywide, but all of the ponds are located north of I 80 in the northern two thirds of the City. The study may yield that only one pond is worthy of modification. In particular, the City would like to study the Core Area Pond in central Davis as it believed to be the pond that receives the most pollutants from its drainage shed. A map can be provided to aid in located each of these ponds. If project is developed an educational component can be added.	100,000 for feasibility study	Feasibility Study
174-YS	City of Davis	Feasibility Study for Stormwater Trash Control Measures	Feasibility study to assess options for stormwater trash control measures. This study will assess the best method(s) to help the City meet mandatory requirements for trash screening to prevent trash from entering waterways. One particular area of concern is Channel A. An option for this area is to install trash racks/debris cages in the Wildhorse Basin to address issues with trash flowing from the area directly into Channel A. There is currently no barrier between the stormwater from the basin and the channel. This study would provide an assessment of potential options to comply with the trash amendment requirements of the Small MS4 permit.	150,000 for feasibility study	Feasibility Study
160	City of Davis	Parks and Greenbelts Irrigation and Landscape Upgrades	The goal of the project is to increase water use efficiency and reduce overall water use in City parks and greenbelts. This will involve converting less used turf areas along greenbelts and in parks to lower water use plants to reduce irrigation needs, the conversion of irrigation in non-turf areas to drip, and the replacement of sprinkler heads and irrigation controllers to increase efficiency. The project will also include converting wells that are currently used for potable water uses to irrigation (non-potable) wells that will supply local parks and greenbelts. The project will also provide some stormwater quality benefits with less water runoff in areas that have been converted to drip irrigation.	\$150,000	Implementable Project
161	City of Davis	Leak Detection Survey	Hire a consultant to use acoustical listening technology to survey water mains and laterals within the City of Davis water distribution area to detect and locate leaks. Prioritize leaks based on severity. Purchase leak detection equipment to install within distribution system to continuously monitor for potential leaks at key areas identified through the leak detection survey.	\$150,000	Implementable Project
164	City of Davis	Russel Boulevard Demonstration LID Project	The project is to be located in front of City Hall (already proposed and working its way through the City's Parks and Community Services Department) along Russell Boulevard. Russel Boulevard is one of the City's prominent east-west arterials. The project is to create a vegetated swale to treat stormwater runoff on the north side of the roadway. The surface area it will treat is 8,000 square feet. It is proposed to treat drainage prior to discharge to the City's stormdrain system consistent with the standards of Section E.12 of the State's Small MS4 Phase II General Permit (Permit). A map can be provided to aid in the location of this project.	42,763 for construction	Implementable Project
167	City of Davis	Davis Greenbelts Landscape Conversions	One of the greatest assets to the Davis park system is the network of more than 60 miles of Green Belts with bike trails that connect parks and neighborhoods throughout the City. Each belt is typically between 100 to 200 feet across with an 8-foot bike path meandering through the middle. Most of the landscape consists of irrigated turf and shade trees. Large open turf areas are greatly appreciated as multi-use event areas for local neighbors, but a majority of the space is mostly utilized by the public as aesthetic while passing through on the bike path. It is these spaces that are great candidates to convert existing turf to a low water use, drought tolerant landscape with interpretive learning opportunities to show the general public ways of converting their landscapes at home.	\$234,819 per acre converted	Implementable Project

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Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
169	City of Davis	Recycled Water Projects	The City is currently evaluating the feasibility of various uses of recycled water using WWTP effluent. The WWTP is being upgraded allowing the City to produce high quality recycled water meeting Title 22 Standards. This project would be to assist with funding implementation of the chosen recycled water use(s). These uses may include but are not limited to water for: habitat, Yolo County Landfill, City-owned lands south of the WWTP, agricultural users in the area, City municipal uses, and filling stations.	\$4.5 million	Implementable Project
173-YS	City of Davis	Bike Tunnel Landscaping Redesign for Stormwater Quality Improvement	Redesign the current drainage and landscaping near greenbelt bike tunnels to prevent flooding from stormwater. Assess the top highly-trafficked tunnels with drainage issues within the greenbelt system. Improved drainage would include re-landscaping the areas surrounding these tunnels to prevent flood events and improve stormwater quality discharges through the use of different stormwater low impact design methods through infiltration, transpiration and evaporation. Each site could showcase a different method; signage near the tunnels would illustrate the project and highlight elements of the project design.	Estimate of \$40,000 for site survey and initial project design	Implementable Project
186-YS	City of Davis	West Area Pond Redesign	Redesign the West Area Pond (detention basin) to utilize agricultural summer flows to enhance aquatic wildlife habitat and improve water quality. This proposal involves redirecting existing agricultural runoff through the Stonegate drainage pond and pumping it into the West Area Pond. This would enhance aquatic habitat while improving any water discharges through retention, enhancing opportunities for infiltration, transpiration and evaporation.	100,000 for feasibility study	Implementable Project
201	City of Davis	Davis Wetlands Public Access Improvements	Install user amenities at the Davis Wetlands to enhance educational and passive recreational access. Primary improvements include installation of a permanent vault toilet, observation tower with interpretive panels, and shaded picnic facility.	\$150,000	Implementable Project
202	City of Davis	Davis Manor Neighborhood Green Street Project	The Davis Manor Neighborhood Green Street Project proposes to retrofit the neighborhood with the following greening treatments: -Plant 90 new trees to sequester carbon and reduce energy consumption -Build 40 rain garden planters to serve as new wildlife habitat and capture stormwater-Convert 9,480 sq. ft. of impermeable surfaces into walkable green space to enhance the pedestrian experience -Transform 5,000 sq. ft. area of the neighborhood into the "Green Heart" to serve as a hub for resident gatherings -Replace 3,000 sq. ft. section of street parking area with a permeable surface strip -Replace 400 sq. ft. area of streetscape with new drought-tolerant landscaping -Install 15 curb ramps and widening sidewalks to improve accessibility - Renovate a dilapidated pocket park to increase community usage -Install interpretative signage to teach visitors and encourage replication	\$1,526,450	Implementable Project
203	City of Davis	Recycled Water Pump Station	with the completion of secondary and tertiary improvements, the City's wastewater treatment plant is now capable of producing tertiary disinfected effluent that meets the requirements of Title 22 of the California Code of Regulations for recycled water. However, a final component of these upgrades is a means of delivering the recycled water produced at the WWTP to potential future customers. New infrastructure is necessary to convey recycled water from the WWTP to potential future customers or to send recycled water to locations within the WWTP property boundary for storage or disposal. This infrastructure, referred to as the "Phase 1 Recycled Water Facilities", will include a new Recycled Water Pump Station and associated piping specifically for conveyance of recycled water to onsite storage ponds and the WWTP's overland flow (OLF) site. To allow for greater operational flexibility, the Recycled Water Pump Station will be designed for a target minimum flowrate of 2,500 gpm with one pump in operation. At this higher flowrate, the City will be able to operate the Recycled Water Pump Station for less than 24 hours per day and still meet the peak day diversion targets. The pump will also be equipped with a variable frequency drive (VFD), which further increases operational flexibility. The pump station will be sized to accommodate a second pump in the future. The Recycled Water Pump Station will draw disinfected tertiary recycled water from the effluent channel of the recently-constructed chlorine contact tank (CCT) and has been designed to deliver water to any of the following locations for disposal or beneficial reuse: <ul style="list-style-type: none"> • Zones 5 - 15 of the OLF • Recycled Water Pond 1 (formerly Aerated Pond 1) • The Return Channel that provides conveyance to the WWTP's former Oxidation Ponds • A future off-site recycled water storage tank located on the City's Howatt Ranch property 	\$1,025,800	Implementable Project
204	City of Davis	Sewer Lateral Replacement	The project would replace aging sewer laterals with corrosion and other issues to protect water quality and reduce the potential for accidental sanitary sewer discharges into the stormwater conveyance system. The project would occur City wide over 3 to 4 years.	\$1,000,000	Implementable Project
182-YS	City of Davis	Site Survey for Converting Rocky Swales to Bioswales	In public greenbelts and parks, convert existing rocky drainage swales into bioswales to provide environmental benefits. Convert drainage in areas that currently use rocky swales, such as in Mace Ranch Park and the housing development behind Montgomery Elementary in South Davis, to bioswales. Converting the existing rocky swales to vegetative bioswales will encourage microhabitats, beneficial insects, infiltration, transpiration, and evaporation to better showcase stormwater retention techniques. Other possible sites include Evergreen Pond and North Star Park.	Estimate of \$40,000 for site survey and initial project design	Planning

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Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
183-YS	City of Davis	Site Survey for Hardscape Conversion to Pervious Pavement	Survey public parking lots that currently have impervious surfacing to assess the practicality of converting these locations to pervious pavement when they are in need of resurfacing, maintenance or redesign. Portions of the pathways near the sites could potentially highlight permeable pavers in addition to the parking lots. Projects could be planned with improvements to incorporate bioswales, low water use plants, and other low-impact design measures into any landscape changes at the site. The projects would include signage on stormwater techniques implemented and information about water quality.	Estimate of \$40,000 for site survey and initial project design	Planning
142	City of Vacaville	Centennial Park Riparian Forest Restoration and Loop Trail Development Project	This project proposes to restore riparian environment along two tributaries of Horse Creek by controlling invasive species and installing a diverse selection of native trees, shrubs and perennial forbs in a 140 foot by 2,400 foot long corridor along the middle tributary and a 185 foot wide by 2,950 foot long corridor along the northern tributary.	\$1,248,027	Implementable Project
145	City of West Sacramento	Municipal Well at the George Kristoff Water Treatment Plant	Project includes environmental, design and construction of a new municipal well located at 400 N.Harbor Blvd in the City of West Sacramento. This well will augment City potable water supplies during drought conditions. This well is not intended to increase water production but allow upstream surface water diversions by as much as 4,500 acre feet annually.	\$750,000	Implementable Project
159	City of Winters, CA	City of Winters Drinking Water Hexavalent Chromium (Cr6) Compliance Project	The City is under Notice of Violation with the SWRCB Division of Drinking Water to reduce Cr6 levels in four of its five wells (82% of the City's water supply) exceeding the new Cr6 Primary MCL. This is a new drinking water quality regulation approved by the State in July 2014 with enforcement beginning in August 2015 for urban water suppliers with sources in exceedance of the new Cr6 regulations. The City is requesting funds to design a cost-effective Cr6 compliance strategy for the community that meets the new Cr6 regulations within the State's compliance schedule.	\$6-8 million (over 5 years)	Planning
180-YS	City of Woodland	North Regional Pond and Pump Station	The project involves the design and construction of an approximate 75 acre sedimentation pond and a pump station able to eventually accommodate a 120-cfs design flow. Project re-purposes an existing City evaporation pond that is no longer in use for any purpose. Currently the pond only receives nearby runoff. This project will add the NR Pond hydraulically into the City's storm drainage network and include: Low flow training wall and inlet pipes from the Gibson Channel to the NR Pond* High flow weir from South Canal to the NR Pond* Outlet pipes from NR Pond to the South Canal* Pump station at the downstream terminus of the South Canal* Force main and outfall from the pump station to the outfall channel	\$8,000,000	Implementable Project
193	City of Woodland	Well 31 ASR Project	The project involves the design and construction of a new municipal aquifer storage and recovery (ASR) well #31 near the site of the existing Well #6. The new ASR well will facilitate groundwater recharge by injecting treated surface water into the gravel layer approximately 500 feet below the surface when surplus Sacramento River water is available during winter months. The ASR well water would be pumped from the ASR well to supplement surface water during drought conditions and to meet peak summer demands. ASR also has long-term water quality benefits because injected water replaces native groundwater impaired by nitrate and naturally occurring metallic species, including arsenic, hexavalent chromium, manganese, and selenium, with better-quality water. The intent is to inject water into the ASR well each winter and build a large reservoir of treated surface water beneath the well and utilize the water primarily during drought years. The project removes a high capacity groundwater extraction well from the regional aquifer and replaces it with a well that will promote groundwater recharge and sustainability while improving Woodland's water supply reliability during a drought. The ASR program greatly reduces the need for Woodland to utilize native groundwater in the City's water system. The City recently completed construction of three ASR Wells. The testing completed to date has been a success and indicates that ASR technology is successful in Woodland. The extracted water retains the constituent characteristics of treated surface water. The new ASR well would include the ability to inject treated surface water at a rate of approximately 2,000 gpm and extract water at a rate of approximately 3,500 gpm. The new ASR well is considered a Categorical Exemption under CEQA as it is a replacement of an existing water supply facility. The EIR for the ASR program has been completed and all necessary permits have been secured. The existing well will be properly destroyed.	\$6,250,000	Implementable Project
194	City of Woodland	Outfall Channel Culvert Replacement Project	City has a single stormwater discharge location. The outfall is limited by three (3) existing 36" diameter culvert pipes that penetrate a levee road. The existing culverts are limited in that: (a) they are in poor condition and their flap gates have fallen off and (b) within the next few years, based on development, they will be insufficient to handle the amount of City stormwater flows. Plan to replace the three (3) existing 36" diameter culverts with five (5) 72" diameter ones to accommodate for full City build-out (2035)	\$2.5 million	Implementable Project

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Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
195	City of Woodland	Woodland Recycled Water Utility Expansion Project (Phase II)	The City of Woodland currently has tertiary treated Title 22 effluent from the City's Water Pollution Control Facility (WPCF) providing a firm capacity of approximately 2,700 gpm for recycled water. Woodland has an existing recycled water utility serving 2 City parks and a large industrial user in the industrial area northwest of the Water Pollution Control Facility (WPCF). The City has planned for an expansion of the recycled water utility into the Spring Lake Area of the City and also to serve the planned Woodland Research & Technology Park. There are several existing large water users that would use the recycled water for irrigation of parks and roadside landscaping. Businesses in the Research Park would utilize recycled water for cooling buildings. In addition, recycled water would be available to extend into new development areas for landscape irrigation. Portions of recycled water pipelines in Spring Lake have already been constructed by development projects. Providing recycled water to these areas would reduce demands on the potable water distribution system and reduce the demand on the groundwater aquifer. The recycled water pipeline would be constructed in the City's existing right of way. The City has recently completed a Mitigated Negative Declaration for the project. The expected initial demand for recycled water would exceed 110 acre feet per year. The Capital Cost for the Project is approximately \$2.5M. The recycled water project includes construction of approximately 10,000 feet of 8" diameter purple pipe and a 100,000 gallon storage tank. The project also provides recycled water for expansion (Phase III) to west of Highway 113.	\$2,500,000	Implementable Project
196	City of Woodland	Woodland Recycled Water Utility Expansion Project (Phase III)	The City of Woodland currently has tertiary treated Title 22 effluent from the City's Water Pollution Control Facility (WPCF) providing a firm capacity of approximately 2,700 gpm for recycled water. Woodland has an existing recycled water utility serving 2 City parks and a large industrial user in the industrial area northwest of the Water Pollution Control Facility (WPCF). The City has planned for an expansion of the recycled water utility into the Sports Park Area of the City and also to serve the planned SP1B and SP1C areas in the City's General Plan. There are several existing large water users that would use the recycled water for irrigation of parks and roadside landscaping. In addition, recycled water would be available to extend into new development areas for landscape irrigation. Providing recycled water to these areas would reduce demands on the potable water distribution system and reduce the demand on the groundwater aquifer. The recycled water pipeline would be constructed in the City's existing right of way. The City has recently completed a Mitigated Negative Declaration for the project. The expected initial demand for recycled water would exceed 70 acre feet per year. The Capital Cost for the Project is approximately \$925,000. The recycled water project includes construction of approximately 4,300 feet of 8" diameter purple pipe.	\$925,000	Implementable Project
45	City of Woodland / floodSAFE Yolo Pilot Program	Lower Cache Creek Flood Risk Reduction Project	The primary purpose for the Project is to reduce the risk of flooding to the City of Woodland and adjacent land including the rural Town of Yolo and Interstate 5. The Project is in the initial phases of a feasibility study for which the City has executed a Federal cost share agreement with the USACE and CVFPB and a non-federal cost share agreement with the CVFPB.	\$0	Feasibility Study
55	Clearlake Oaks County Water District	Plant Intake	Install a new water intake in the lake that is capable of drawing water from different depths, with installation of an amiad pre-filter at the pier where the intakes are located. This will allow a greater control of influent turbidity and pH by controlling what depth the intake will be drawing water from.	\$0	Planning
46	Colusa County Resource Conservation District	Bear Creek Habitat Enhancement	The Bear Creek Habitat Enhancement project will be implemented in two phases. Phase I will provide for landowner/agency outreach activities and the development of a locally-driven plan to address tamarisk infestations and the re-establishment of native riparian species along Bear Creek in western Colusa County. Phase II will provide for habitat enhancement activities on a minimum of 3.5 miles of Bear Creek and .5 miles of Sulphur Creek.	\$400,000	Planning
48	Crescent Bay Improvement Company	Crescent Bay Improvement Company	Crescent Bay improvement Company has been on a Boil Water Order since 1999. There are 3 objectives to this project: 1) replace the 80-year old distribution lines which are leaking, 2) drill a well and replace our surface water source with ground water, and 3) explore the feasibility of and purchase a neighboring water company and develop an intertie with that system.	\$1,000,000	Implementable Project
168	Davis Joint Unified School District	Harper Junior High Water Conservation Improvements	Frances Harper Junior High School presents a unique opportunity for water conservation through education and the creation of outdoor classrooms. The school serves over 600 students in grades 7 to 9. Located on East Covell Boulevard in Davis, the property is a 45-acre parcel with about 23 acres in active use. Primary improvements for water conservation are proposed to occur at the front and interior of the site. Current landscape at the front of the school includes 2.3 acres of turf that is primarily for the purpose of aesthetics. There are also interior courtyards with underutilized turf panels that total a little over one-third of an acre. Planned improvements for these areas include replacing the turf with drought tolerant plants, pollinator gardens, benches, bio swales and decomposed granite paths. Interpretive panels would be installed to inform students and visitors of the benefits of the water conservation improvements and the relative ecosystems for each environment. Interior improvements would also include capturing roof water from downspouts and directing the water to bio swales where it would be filtered before entering the storm drain system or simply percolate into the soil. Interior courtyard landscapes would also be laid out to accommodate a setting for outdoor classrooms.	\$862,968 if full project implemented	Implementable Project

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Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
166	Department of State Hospital	Recycled Water Conversion projects	Napa State Hospital currently utilizes potable water supplied by the City of Napa for almost all irrigation needs (a limited area is currently served by recycled water). In 2011, NSD installed a recycled water main through NSH which included three metered turnouts. The project will connect to these turnouts, with the downstream improvements owned and operated by NSH. To convert the irrigation system, approximately 38,000 lineal feet of recycled water pipe will be installed, along with valves, and ancillary improvements to deliver water to 139 irrigation points of connection. The connections typically occur at existing irrigation back flow devices, which will be replaced. Existing improvements downstream of the back flow devices will remain in place. Signage and modifications to above ground irrigation valves in accordance with NSD requirements are also part of the project.	\$6,133,900	Implementable Project
49	Dixon Regional Watershed Joint Powers Authority	Dixon Main Drain / V-drain Enlargement Project	The purpose of the project is to reduce local flooding caused by regional drainage flows that exceed the existing capacity of these channels by increasing the capacity of these constructed drainage facilities.	\$3,100,000	Planning
50	Dixon Regional Watershed Joint Powers Authority	Eastside Drain	The Eastside Drain project will construct segments of new channels and enlarge existing channels. The Project will add an increment of 120 cfs to the Dixon Main Drain / V-drain Enlargement Project.	\$5,251,000	Planning
51	Dixon Resource Conservation District	Storm Flow Reduction From Agricultural Lands North of Interstate 80	The Proposed Project is based on providing detention storage for a 10-year storm event.	\$487,000	Planning
56	East Lake Resource Conservation District	Upper Putah Creek Watershed Management Plan	This project will produce a comprehensive Regional Watershed Management Plan for the Putah Creek Watershed located in Lake, Napa, Solano, and Yolo Counties. This will include conducting a thorough geomorphic study to better understand current conditions as related to water quality, water quantity, wildlife habitat, and socioeconomics. The project will assemble past studies and reports to identify data gaps, conduct on-the ground scientific investigations, and interview citizens and stakeholders through an education and outreach program. The result will be a management plan that identifies watershed related issues that will provide recommendations for implementation.	\$500,000	Planning
170	Harbor View Mutual Water	Water Storage Tank Replacement Project	The community currently has two 50 year old redwood storage tanks that have started to leak a significant amount of water due to rot and age. One of the tanks is in the middle of the water system and can't be taken out of service for maintenance. Neither tank is seismically secured to the cement foundation under them. The company contracted Water Works Engineering to draft us a PER as to the best way to solve our water storage tank problems, it was determined that replacement of all three of our current tanks with two new bolted steel tanks would be the cheapest and easiest fix for the long term. The estimated replacement cost the entire project is 1.3 million.	\$1,361,068	Implementable Project
96	Knights Landing Ridge Drainage District	Mid Valley, Knights Landing Repair Project	Subset of the Mid-Valley Area Levee Reconstruction Project currently underway through a partnership with ACOE and the Central Valley Flood Protection Board.	\$6,883,000	Implementable Project
128	Lake Berryessa Resort Improvement District	Program to Prevent Wastewater Discharges	This project will repair or replace sections of sanitary sewer collection laterals and mains that are experiencing above normal levels of storm water inflow/infiltration (I/I).	\$1,500,000	Implementable Project
87	Lake Berryessa Resort Improvement District	LBRID Wastewater Storage Pond and Disposal Improvements	This project will upgrade the wastewater storage ponds and disposal spray fields.	\$3,000,000	Implementable Project
88	Lake Berryessa Resort Improvement District	Water Tank Replacement Project	The three existing potable storage tanks have reached the end of their useful life. The project will replace these three tanks to ensure a continuous water supply for the residents in the future.	\$1,500,000	Implementable Project
153	Lake Berryessa Resort Improvements District	Sewer Lift Station Upgrades	A single six (6) inch asbestos cement sewer main installed in the mid 1960s conveys pumped raw sewage from the Lift Station A Collection Tank to remote Facultative Ponds and Sprayfields. Approximately 5,200 feet of the sewer trunk line is under high pressure due to a 231 foot change in elevation from the tank to terminus manhole and frictional headloss within the pipe. Combination of age (50 years), high working pressure (> 100 psi) and asbestos cement pipe properties have caused leaks and breaks prompting emergency repairs. The existing AC sewer main has inadequate hydraulic capacity to handle 100-year design storm inflows per requirements mandated by the Central Valley RWQCB. The project will replace 3,000 feet of sewer main and appurtenances from Lift Station A traversing below the Storage Pond access road.	\$1,094,250	Implementable Project
154	Lake Berryessa Resort Improvements District	Sewer Lift Station Upgrades	Sewer Lift Stations B, C and D in the residential collection system have insufficient firm pumping capacity and to handle 100-year design storm inflows per requirements mandated by the Central Valley RWQCB. The project will replace progressive cavity style pumps with latest technology chopper pumps, renew yard piping plus appurtenances and upgrade the electrical systems.	\$635,500	Implementable Project
89	Lake County Special Districts	Soda Bay Water System Improvements	This project will correct deficiencies caused by increased algae blooms in Clear Lake in the system that are required for public safety and regulatory requirements.	\$1,500,000	Implementable Project

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147	Lake County Special Districts	Paradise Valley-Clearlake Oaks County Water Consolidation	Paradise Valley Water System, County Service Area 16 (CSA #16), serves 75 customers. The system does not have adequate source capacity in accordance with Section 64554, Chapter 16, Title 22 of the California Code of Regulations. CSA #16 has three wells that when combined do not produce the required source capacity. Attempts to drill a fourth well in 2012 were unsuccessful. The current drought has further reduced the wells ability to produce and the CSA is critically challenged to produce sufficient water for human consumption. The CSA is under an urgency ordinance and required to keep usage below 50 gpd per person. The option of building a surface water treatment plant is not desirable due to the poor water quality of Clear Lake and the costs would be prohibitive for the very small district. It has been determined that consolidating with Clearlake Oaks County Water System (CLOCWS) is the best option for resolving the lack of source capacity. Consolidation with CLOCWS would benefit both systems as it would resolve source capacity for CSA # 16 and would allow CLOCWS to expand their customer base and upgrade storage. Project will include the construction of a pipeline to distribute water to CSA # 16.	\$1,500,000	Implementable Project
148	Lake County Special Districts	Spring Valley Water System Distribution Line Loop	Spring Valley, CSA #2 is a public water system serving 493 customers. CSA #2 draws water from Indian Valley Reservoir which is at a critically low level due to the drought. Storage for Indian Valley reservoir is currently 27,753 acre feet compared to 96,411 acre feet last year. Release of 10 cubic feet per second is required for fish habitat. This project would help preserve sufficient quantities of water for both human consumption and preservation of the fish habitat. The old and deteriorated distribution system is experiencing numerous leaks which are increasing the amount of water required for community consumption. In addition to the leaking pipes, the system has lines that "dead end" and must be flushed regularly to avoid a dangerous buildup of trihalomethanes. (a dangerous by-product of the treatment process) Flushing the lines also requires large quantities of water to be wasted. TSpring Valley, CSA #2 is a public water system serving 493 customers. CSA #2 draws water from Indian Valley Reservoir which is at a critically low level due to the drought. Storage for Indian Valley reservoir is currently 27,753 acre feet compared to 96,411 acre feet last year. Release of 10 cubic feet per second is required for fish habitat. This project would help preserve sufficient quantities of water for both human consumption and preservation of the fish habitat. The very old distribution system is experiencing numerous leaks which are increasing the amount of water required. Over 12,000,000 gallons of treated water is being lost per year through leaks. In addition to the leaking pipes, the system has lines that "dead end" and must be flushed regularly to avoid a dangerous buildup of trihalomethanes. (A dangerous by-product of the treatment process) Flushing the lines also requires large quantities of water to be wasted. The proposed project would resolve these two critical needs. Additional benefits would be improvements to the fire suppression abilities and a decrease on operating and maintenance costs. The extension of water lines for looping the system would allow installation of fire hydrants in areas that have not had access to water lines and are at risk of wild fires. This project would consist of the replacement of 7,500 feet and new installation of approximately 9,100 feet of C-900 water lines which will increase water supply reliability, water conservation and water use efficiency as well as improve drinking water quality and help alleviate fire danger. Up to 45% of the water drawn from the reservoir and treated is being lost due to the old deteriorated water lines and the need for frequent line flushing.	\$1,260,000	Implementable Project
150	Lake County Special Districts	Mt. Hannah, CSA #22 Water System	Mt. Hannah, CSA #22 is a public water system serving 36 customers. CSA #22 relies on ground water for supply. Due to current drought conditions, the well level dropped 65% from January 2013 to January 2014. The well has lost the ability to recharge and can only be pumped for approximately 30 minutes and then must be allowed to recharge for 2 to 3 hours. Due to the well being overdrawn, turbidity issues have become a problem. Filtering for turbidity requires even more water that is not available. We are in the process of preparing to truck water to the community from outside the area. This will be very costly and an extreme financial burden on the disadvantaged community. In addition to the loss of capacity, the system has a deteriorated trunk line that has severe leaks and is losing up to 45% of the water being pumped. The customers are economically disadvantaged. They have been conserving water and the average consumption for the CSA is approx. 35 gallons per day per person. Water rates for this CSA are considerably higher than the county average but due to the small number of customers, the CSA struggles financially and has not been able to build a capital reserve fund. The geographic location of this CSA eliminates the option of consolidation. It is located on Cobb Mountain and not near any other systems that it could tie into. The CSA desperately needs a deeper well and a new trunk line installed.	\$270,000	Implementable Project
67	Lake County Water Resources Department	Cache Creek Flow Enhancement Project	This project will evaluate the removal and maintenance of the gravel bar at the Grigsby Riffle to reduce flow restrictions in the Cache Creek Outlet Channel.	\$200,000	Feasibility Study
68	Lake County Water Resources Department	Assess stream channel hydrology and related riparian and aquatic habitats for restoration	This project will survey stream channels, especially in the level valleys in the lower elevations of the Upper Cache and Upper Putah Creek watersheds, and subsequent prioritization based on erosion hazard, potential for significant habitat improvement, and other factors.	\$250,000	Feasibility Study
63	Lake County Water Resources Department	Develop and Implement a Comprehensive Watershed Monitoring Programs	Meeting of agencies, Tribes, and organizations currently monitoring water quality in the Clear Lake Watershed to coordinate monitoring activities and reduce overlap when possible.	\$0	Implementable Program

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
94	Lake County Water Resources Department	Increase Cache and Putah Creek Watershed Education and Outreach	Develop and improve education programs that provide public with information on watershed programs and related proper management techniques.	\$0	Implementable Program
57	Lake County Water Resources Department	Restore Native Fish Spawning Areas in Clear Lake Tributaries	This is a series of projects to eliminate some of the major barriers to fish passage. Projects include: Kelseyville Main Street check dam (Kelsey Creek); Decker Bridge (Scotts Creek); Rancheria Road Bridge (Middle Creek); Sewer Crossing (Seigler Canyon Creek); Clover Creek Diversion Channel; Creek Delta Diversity (multiple creeks).	\$5,560,000	Implementable Project
59	Lake County Water Resources Department	Middle Creek Flood Damage Reduction and Ecosystem Restoration Project	This project will eliminate flood risk to 18 residential structures, numerous outbuildings and approximately 1,650 acres of agricultural land and will restore damaged habitat and the water quality of the Clear Lake watershed. Reconnection of this large, previously reclaimed area, as a functional wetland is anticipated to have a significant affect on the watershed health and the water quality of Clear Lake. The project consists of purchasing the flood prone property "protected" by the substandard levee, mitigating flood impacts to roads and utilities, reconstructing historic channel patterns, and breaching the levee in numerous locations that allow Clear Lake to reflow the Project area.	\$55,426,000	Implementable Project
69	Lake County Water Resources Department	Adobe Creek Conjunctive Use Project	Addition of conjunctive use to the operation of Highland Creek Reservoir (Lake County), through the addition of sluice gates to the existing Principal Spillway structure at Highland Creek Dam.	\$700,000	Implementable Project
58	Lake County Water Resources Department	Reduce Flood Damage	This project will reduce flood damage by structural and non-structural methods and will reduce flood risk to property owners in Lake County through 1) buyouts and relocations or floodproofing 2) implementation of the Middle Creek Flood Damage Reduction and Ecosystem Restoration Project 3) Upgrades of bridge and culvert capacities to reduce flooding 4) Implementation of the Cache Creek flow enhancement project 5) Implement channel and levee improvements to the Middle Creek Flood Control Project	\$0	Planning
60	Lake County Water Resources Department	Improve Watershed Roads and Trails to Reduce Soil Erosion	Provide supplemental funding to government programs to survey road and trail conditions and maintain, upgrade, decommission, or re-route them as needed.	\$0	Planning
61	Lake County Water Resources Department	Improve Water Dependent Recreation Opportunities	Development of a trail system within Lake County as described in the general plan.	\$0	Planning
62	Lake County Water Resources Department	Identify, Protect and restore Important Wildlife Habitat Areas in Clear Lake	Development of a plan that provides for protection of important wildlife habitat areas within Clear Lake including bird nesting areas and shoreline wildlife preserves.	\$0	Planning
64	Lake County Water Resources Department	Develop a Native Fish Management Plan	Conduct studies to identify and fill gaps in information and understanding of native fish populations with in Lake County. Use these studies to develop a Native Fish Management Plan.	\$250,000	Planning
65	Lake County Water Resources Department	Collaborative Process to Update Clear Lake Integrated Watershed Management Plan	Update of CLIWM Plan.	\$0	Planning
66	Lake County Water Resources Department	Clear Lake Water Quality Assessment	Planning/assessment project to assess the current limnological conditions and to identify and select measures necessary for Clear Lake to meet the water quality objectives as specified in the Basin Plan, as required by the Basin Plan amendment implementing the Nutrient TMDL for Clear Lake.	\$540,000	Planning
97	Lake County Water Resources Department for RWMG	Form Task Force/Subcommittee to strategize and implement Watershed Education and Outreach	Support appointment of an Education Task Force/Subcommittee to prepare a Regional Watershed Education Plan for a 2-year implementation period.	\$0	Planning
2	Lower Putah Creek Coord. Committee	505-East Channel Restoration	Restore 10 acres of riparian forest, 3/4 mile of river channel, remove 22 occurrences (2 net acres) of 6 primary invasive weeds; reconfigure one thousand feet of river channel, restore 100 feet of eroding stream bank, create 3/4 mile of south bank bench trail connecting Yolo Housing to the City of Winters at low flows.	\$350,000	Feasibility Study
4	Lower Putah Creek Coord. Committee	Dry Creek Wildlife Migration Corridor Feasibility Study	Feasibility study to restore 2 miles of wildlife corridor from the confluence of Putah Creek along Dry Creek on the western boundary of Winters	\$20,000	Feasibility Study
5	Lower Putah Creek Coord. Committee	Duncan-Giovannoni Channel Restoration Feasibility Study	Determine feasibility to restore 80 acres of riparian forest, reconfigure one mile of river channel, remove 96 occurrences (7 net acres) of 5 primary invasive weeds. Convert five acres of excess open water (gravel pit captured by the channel) to floodplain, restore natural meander form, pool-riffle sequence, functional floodplain elevations, salmon spawning habitat and native vegetation.	\$35,000	Feasibility Study
6	Lower Putah Creek Coord. Committee	Glide Ranch Channel Restoration Feasibility Study	Feasibility study to restore 160 acres of riparian forest, reconfigure 11,250 feet of river channel, remove 128 occurrences (8 net acres) of 8 primary invasive weeds. Grade floodplain to functional elevation, convert 15 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$30,000	Feasibility Study
8	Lower Putah Creek Coord. Committee	Lower McNamara Pool Channel Reconfiguration Feasibility Study	Determine feasibility to: restore 25 acres of riparian forest, reconfigure 3,150 feet of river channel, remove 25 occurrences (0.5 net acres) of 6 primary invasive weeds. Convert seven acres of excess open water (gravel pit captured by the channel) to floodplain, restore natural meander form, pool-riffle sequence, functional floodplain elevations, salmon spawning habitat and native vegetation.	\$30,000	Feasibility Study

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
9	Lower Putah Creek Coord. Committee	MacQuiddy Channel Reconfiguration Feasibility Study	Determine feasibility to: restore 34 acres of riparian forest, reconfigure 3,800 feet of river channel, remove 44 occurrences (6 net acres) of 5 primary invasive weeds. Grade floodplain to functional elevation, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$25,000	Feasibility Study
10	Lower Putah Creek Coord. Committee	Mace to Road 106A Channel Restoration Feasibility Study	Feasibility study to restore 305 acres of riparian forest, reconfigure 2.7 miles of river channel, remove 124 occurrences (12.8 net acres) of 5 primary invasive weeds. Grade floodplain to functional elevation, convert 17 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$40,000	Feasibility Study
11	Lower Putah Creek Coord. Committee	Nishikawa Channel Restoration Feasibility Study	Feasibility study to restore 37 acres of riparian forest, reconfigure 2,430 feet of river channel, remove 20 occurrences (1.36 net acres) of 6 primary invasive weeds. Grade floodplain to functional elevation, convert 3 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$20,000	Feasibility Study
12	Lower Putah Creek Coord. Committee	Old Davis Road to Mace Channel Restoration Feasibility Study	Feasibility study to restore 190 acres of riparian forest, reconfigure 3.4 miles of river channel, remove 172 occurrences (5 net acres) of 9 primary invasive weeds. Grade floodplain to functional elevation, convert 27 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$40,000	Feasibility Study
13	Lower Putah Creek Coord. Committee	Olmo-Hammond-UCD Channel Restoration Feasibility Study	Feasibility study to restore 109 acres of riparian forest, reconfigure 9,765 feet of river channel, remove 70 occurrences (2.5 net acres) of 9 primary invasive weeds. Grade floodplain to functional elevation, convert 17 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$35,000	Feasibility Study
16	Lower Putah Creek Coord. Committee	Restoria Channel Restoration Feasibility Study	Feasibility study to restore 93 acres of riparian forest, reconfigure 4,300 feet of river channel, remove 46 occurrences (3.2 net acres) of 6 primary invasive weeds. Grade floodplain to functional elevation, convert 2 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$25,000	Feasibility Study
17	Lower Putah Creek Coord. Committee	Road 106A to Yolo Bypass Channel Restoration Feasibility Study	Feasibility study to restore 52 acres of riparian forest, reconfigure 6,000 feet of river channel, remove 42 occurrences (8 net acres) of 6 primary invasive weeds. Grade floodplain to functional elevation, convert 11 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$30,000	Feasibility Study
18	Lower Putah Creek Coord. Committee	Russell Ranch Channel Restoration Feasibility Study	Determine feasibility to: restore 50 acres of riparian forest, reconfigure 5,500 feet of river channel, remove 91 occurrences (2.75 net acres) of 8 primary invasive weeds. Grade floodplain to functional elevation, convert 7 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$30,000	Feasibility Study
19	Lower Putah Creek Coord. Committee	Stevenson Bridge Channel Restoration Feasibility Study	Feasibility study to restore 22 acres of riparian forest, reconfigure 2,100 feet of river channel, remove 29 occurrences (0.5 net acres) of 6 primary invasive weeds. Grade floodplain to functional elevation, convert 1.5 acres of excess open water to floodplain, restore natural meander form, pool-riffle sequence, salmon spawning habitat and native vegetation.	\$25,000	Feasibility Study
21	Lower Putah Creek Coord. Committee	Upper McNamara Pool Channel Reconfiguration Feasibility Study	Determine feasibility to restore 30 acres of riparian forest, reconfigure 3,300 feet of river channel, remove 52 occurrences (4 net acres) of 7 primary invasive weeds. Convert five acres of excess open water (gravel pit captured by the channel) to floodplain, restore natural meander form, pool-riffle sequence, functional floodplain elevations, salmon spawning habitat and native vegetation.	\$30,000	Feasibility Study
3	Lower Putah Creek Coord. Committee	Apricot Draw Bank Stabilization	Restore 3,000 feet of Apricot Draw, stabilizing eroding banks, removing invasive weeds and planting native vegetation.	\$120,000	Implementable Project
7	Lower Putah Creek Coord. Committee	Putah Creek Interdam Reach Invasive Weed Control	Remove 127 occurrences (8.6 net acres) of 11 primary invasive weeds from 6.5 river miles (400 acres) of riparian corridor between Monticello Dam and Putah Diversion Dam and install native vegetation where weeds are removed.	\$150,000	Implementable Project
14	Lower Putah Creek Coord. Committee	Pleasant Creek Wildlife Migration Corridor Plan	Plan to restore 7,000 feet of wildlife corridor of Pleasant Creek to the confluence with Putah Creek, stabilizing eroding banks, removing invasive weeds and planting native vegetation.	\$10,000	Implementable Project
15	Lower Putah Creek Coord. Committee	Pleasants Creek Bank Stabilization	Restores 84 acres of riparian habitat along 7 miles of Pleasants Creek, stabilizing eroding banks, removing 135 occurrences (13.4 acres) of invasive weeds and planting native vegetation.	\$1,000,000	Implementable Project
20	Lower Putah Creek Coord. Committee	Thompson Canyon Bank Stabilization Design and Permits	This study provides plans, specifications and permits to restore 1.5 miles of Thompson Canyon at the confluence of Putah Creek, stabilizing a poorly engineered legacy road that annually degrade water quality and smother prime trout spawning habitat below Monticello Dam.	\$100,000	Implementable Project
22	Lower Putah Creek Coord. Committee	Warren Weed Control	Restore 11 acres of riparian forest, 1,700 of river channel, remove 26 occurrences (2 net acres) of 8 primary invasive weeds. One of the densest thickets of eucalyptus with over 300 trees averaging 24 inches in diameter.	\$175,000	Implementable Project
190-YS	Madison CSD	Madison Farmer Field Stormwater Capture and Groundwater Recharge	Modify farmer fields around Madison, specifically those next to Highway 16 and those that will capture upstream flows. The two options considered include 1) 1,200 acres of farmer field modification for rainfall capture (8"-berm) and 2) modification of a farmer field near Cache Creek (maybe half of APN 049-060-017) for rainfall and storm water runoff capture a 3-' high storm water detention basin. This project will require farmer participation and advanced planning for field modification, and will depend on the storm intensity. The first option will only capture rainfall and the second option will capture rainfall and allow runoff to be collected into the detention basin. The second option will require more modification to the property, additional infrastructure for channeling runoff into the basin, and a pump if the water needs to be drained from the basin.	\$100,000 - \$400,000	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
191-YS	Madison CSD	Western Yolo Sloughs Citizen Science Program	Sloughs surrounding the Madison area are known to cause regular flooding in Madison and beyond. Namely, Cottonwood Slough, Lamb Valley Slough, the South Fork Willow Slough and the Madison Drain have been identified as sources of flooding in Madison in various studies and reports. It seems likely that mitigation upstream in these sloughs to remove water before the sloughs reach Madison and Esparto, and management of the sloughs to keep them free of debris could help in alleviating flooding in the area. However, none of these channels are monitored, therefore, it is unknown what capacity these sloughs have, when that capacity is reached (during or after a storm), or what type of mitigation would be most fitting for each slough. Additionally, it is not known if the Winters Canal is also full when sloughs are full, or if it may have capacity that could be used to alleviate the sloughs when they are over flowing. The Madison CSD with its partners will develop a citizen science program where Madison residents and residents from the nearby areas will visit sloughs and canals that carry water in and around Madison following rain events. The program members will record whether they see water flowing in the sloughs and canals at previously determined locations, and record observations such as whether the channels are successfully carrying the flows, appear to be obstructed, or are overflowing. The information will be compiled in an easy to use format so that members can easily share the information with Madison CSD and others. The information will initially be used until a flow monitoring network can be developed in the sloughs, and potentially beyond. The goal is to gain a better understanding of the slough flow patterns and information that can be used to plan for flood mitigation in Madison, while also engaging and educating the community.	\$0	Planning
71	Mendocino National Forest	Hazardous Fuels Reduction in the Upper Lake Watershed	Management of 28,600 acres within the Upper Lake watershed, including hazardous fuels reduction on areas to be determined during the planning stage.	\$0	Conceptual
70	Mendocino National Forest	Lakeview Hazardous Fuels Reduction	The primary activities proposed under this project are vegetation and surface fuel treatments to reduce hazardous fuels and modify wildland fire behavior.	\$1,250,000	Implementable Project
90	Napa Berryessa Resort Improvement District	NBRID Water Treatment Plant Replacement	The existing water treatment plant will be replaced with a new more technically advanced water treatment plant.	\$2,500,000	Implementable Project
91	Napa Berryessa Resort Improvement District	NBRID Wastewater Storage Pond and Disposal Improvements	This project will upgrade the wastewater storage ponds and disposal spray fields.	\$3,000,000	Implementable Project
92	Napa Berryessa Resort Improvement District	NBRID Wastewater Treatment Plant Replacement	This project will upgrade the existing WWTP. The project will also repair or replace all the existing sewer lift stations.	\$1,500,000	Implementable Project
72	Napa County	Regional Collaborative Water Conservation Program	Expansion of the implementation of the Regional Water Conservation Education Program's conservation education and consumer incentive programs and build on regional water conservation initiatives.	\$125,000	Implementable Project
129	Putah Creek Council	Native Plant Nursery to Support Putah-Cache Ecotype Restoration	Putah Creek Council (PCC) will manage a native plant nursery to grow Putah Creek plants from wild-collected seeds and cuttings at a nursery at the LA Moran Reforestation Center, Davis.	\$16,000	Implementable Project
130	Putah Creek Council	Pollution Prevention and Watershed Education Project	Putah Creek Council (PCC) will educate Winters students, residents, and visitors about storm water and urban runoff, watershed function, and wildlife habitat along Putah Creek via our "Pollution Prevention and Watershed Education" project.	\$23,500	Implementable Project
136	Reclamation District 2035	Levee Repairs/Maintenance- Segments 150, 173 and 297	Complete geological analysis, engineering design required to identify and correct levee deficiencies and hazard mitigation recommendations contained in the URS levee evaluation report (2010) completed at the direction of the Department of Water Resources and additional geologic investigation analysis (to be completed) recommendations.	\$0	Feasibility Study
139	Reclamation District 2035	Floodway Corridor Project	The project consists of three major phases/components: 1) acquisition of Conservation/Flowage Easements - Approx. 7,000 acres.2) New Sacramento River By Pass - A new bypass facility will be constructed to divert flows from the Sac River to the Yolo Bypass. During large storm evens flood flows would be diverted (Sac River) over a new weir to a new bypass channel that would deliver flows to the Yolo Bypass.3) Diverting additional flood flows in to the Yolo Bypass would increase flow and stages in the bypass downstream from the new bypass. To mitigate for potential flow increases, a portion of Conaway Ranch (outside of the Bypass), would be used to convey and store (transitory storage of over 66K acre feet) of flood water during large storm events.	\$0	Feasibility Study
135	Reclamation District 2035	Tule Canal Habitat Enhancement & Sediment Removal	The project consists of: 1) securing an environmental easement that would protect valuable floodplain habitat and adjacent lands from other uses 2) construction of operational facilities for water control and fish passage and 3) regrading portions of the floodplain habitat to increase the quality of seasonally inundation based on managed flows from the Sacramento River.	\$0	Implementable Project
140	Reclamation District 2035	Cross Bypass Canal Modernization	The project consists of piping (or lining) the Cross Bypass Canal and the installation of flow control and measurement devices to improve the conveyance system and increase water use efficiency.	\$0	Implementable Project
137	Reclamation District 2035	Installation of Groundwater Wells	Engineer, design and install groundwater wells.	\$0	Planning
138	Reclamation District 2035	Groundwater Studies	Reclamation District 2035's Ground Studies Project will consist of the identification and analysis of issues, if any, surrounding the quality and availability of groundwater.	\$0	Planning
141	Reclamation District 2035	Conjunctive Use Study	The project consists of the study and analysis of the coordinated use of surface and groundwater that could benefit the agricultural, urban, and environmental interests within, nearby and downstream of Yolo County, especially the North Delta region.	\$0	Planning
99	Reclamation District No. 2068	Agricultural Tail Water Reuse Program	This program proposes to develop an ag water recapture and reuse facility at strategic locations within the agency.	\$50,000	Conceptual

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
102	Reclamation District No. 2068	SCADA Implementation	Install/coordinate local and regional SCADA system to monitor water diversions, pumping plant operations, flood water elevations, groundwater elevations, water distribution within the agency jurisdiction.	\$250,000	Conceptual
100	Reclamation District No. 2068	Irrigation Billing / Irrigation Management System Improvements	The software for a unique water billing is in need of an update, including enhancements in the user interface, data management capability and software/hardware compatibility.	\$50,000	Maintenance/Monitoring
73	Robinson Rancheria	The Restoration of the Clear Lake Hitch to Blue Lakes	Transfer of live hitch fry to the waters of the Blue Lakes in Lake County.	\$0	Implementable Project
74	Robinson Rancheria	Spawning Hitch fish and reproduction loss correction measures for an artificial trap	Installation of a grate at the mouth of the manmade ditch along the Rodman Slough to prevent Hitch fatalities.	\$0	Implementable Project
75	Rural Community Assistance Corporation	DAC Community Wastewater Management Project	RCAC will work with Lake County DACs and tribes to create and implement a septic inspection and monitoring program.	\$108,322	Implementable Project
93	Rural Community Assistance Corporation	Rural Disadvantaged Community (DAC) Partnership Project	RCAC will manage the Prop 84 grant funds to address inadequate water supply and water quality in rural disadvantaged communities (DACs) in the Westside Sacramento IRWM region.	\$127,753	Planning
40	RWMG with selected Lead Agency	Regional Invasive Plants, Aquatic and Terrestrial Weeds Management Plan	This project will include the formation of an Invasive Species Task Force/Subcommittee to prepare a Regional Invasive Species Management/Eradication Plan that documents the extent of invasive terrestrial and aquatic species within the Westside Region; evaluates existing programs to manage invasive species that could be leveraged, and identifies supplemental programs to be developed to fill gaps in existing programs to manage invasive species.	\$0	Implementable Program
76	RWMG with selected Lead Agency	Regional Invasive Mussels Management Plan	This project will include the formation of an Invasive Species Task Force/Subcommittee to prepare a Regional Invasive Mussels Species Prevention Plan that evaluates existing programs to prevent invasive species that could be leveraged, and identifies supplemental programs to be developed to fill gaps in existing programs to manage invasive species. Special high priority emphasis will be placed on prevention of water body infestation by Quagga Mussels.	\$0	Implementable Program
134	RWMG with selected Lead Agency	Climate Change Adaptation Study	Regional study to advance understanding of the effects of climate change and consider potential modifications to the water management system.	\$0	Planning
143	RWMG with selected Lead Agency	Regional Capital Improvement Plan	Create Regional asset management plan to identify and prioritize key water management infrastructure.	\$0	Planning
23	Solano County Water Agency	Aquatic Nuisance Vegetation Management	The goal of the Aquatic Nuisance Species Management Plan is to minimize the harmful ecological, economic, and social impact of aquatic nuisance species through prevention and management of introduction, population growth, and dispersal into, within, and from Solano County.	\$0	Implementable Program
25	Solano County Water Agency	Gibson Canyon Creek Detention Basin	Provide increased flood protection up to 100-year with improved conveyance and containment of out of bank flows. Convert abandoned City wastewater pond to detention basin.	\$10,000,000	Implementable Program
26	Solano County Water Agency	Improvements to Solano Project Facilities	Today, the Solano project provides irrigation and municipal water to over 400,000 people in Solano County. However, the Solano Project is 60 years old and is in need of upgrades, repairs, and modernization.	\$0	Implementable Program
27	Solano County Water Agency	Invasive Plant Removal Program	Program would consist of reducing the geographic extent of invasive plant species (tamarisk, arundo, yellow star thistle, etc.) in riparian and wetland areas in Solano County.	\$0	Implementable Program
28	Solano County Water Agency	Large Landscape Water Efficiency Program	This program will offer financial incentives to commercial customers (businesses, multi-family units) to encourage replacement and upgrade of selected irrigation equipment with new water-efficient irrigation equipment.	\$200,000	Implementable Program
29	Solano County Water Agency	NBA Infrastructure and Capacity Improvements	The North Bay Aqueduct (NBA) is in need of infrastructure and capacity improvements to increase capacity and minimize WQ impacts, to ensure a reliable water supply for Napa and Solano counties.	\$0	Implementable Program
30	Solano County Water Agency	North Bay Aqueduct Alternate Intake Project	The NBA AIP includes the construction and operation of a new intake and pumping plant on the Sacramento River, conveyance pipeline, and inline storage to divert and convey water from the Sacramento River connecting to the existing NBA pipeline near the North Bay Regional Water Treatment Plant in Fairfield.	\$500,000,000	Implementable Project
31	Solano County Water Agency	Improve Solano Project SCADA infrastructure	This project is to install contiguous dedicated power and data lines from the top end of the Solano Project system to the bottom. This would allow monitoring of the entire system simultaneously from a central location and could allow automated remote control.	\$4,000,000	Implementable Project
33	Solano County Water Agency	Research on Hydrodynamics and WQ Interactions in the Delta.	With large projects such as the Bay Delta Conservation Plan, restoration of thousands of acres of tidal marsh habitat as part of the Delta Biological Opinions, and others, there is a need to better understand the hydrodynamic and water quality interactions in the Delta.	\$100,000	Implementable Project
34	Solano County Water Agency	Research on Improving Water Treatment for Delta Sources	The project would build upon past research done at the NBA Treatment Facility, and by other Delta users, to improve water treatment methods, reduce DBPs, and improve water treatment for Delta water users, including the SWP and CVP.	\$100,000	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
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Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
35	Solano County Water Agency	Risk Assessment of Delta Water Supplies	This project would entail a risk assessment of Delta Water supplies, and would look at the impacts of unforeseen circumstances such as: - Earthquakes - Delta levee failure - Sea level rise - and others as needed	\$200,000	Implementable Project
36	Solano County Water Agency	Solano Subbasin Conjunctive Use	Project will improve knowledge on the potential for conjunctive use of groundwater and surface water in the Solano Subbasin. The project will focus on increasing the opportunities for conjunctive groundwater use as a means of increasing water supply and reliability.	\$100,000	Implementable Project
37	Solano County Water Agency	Southwestern Sacramento Valley Basin/Solano Subbasin Groundwater-Surface Water Flow Model to Evaluate Recharge, Conjunctive Water Use, and Future Deep Zone Pumpage	The major goal of this project is to consider the potential effects of conjunctive water use scenarios on stakeholders in the greater Solano area, including the Sacramento River and other significant surface water courses in the model area. Another goal of this project is to evaluate the effects of developing new and/or redistributing deep pumpage either horizontally over a spatial area or vertically over different aquifer units with the goal of reducing drawdowns in the basal zone.	\$250,000	Implementable Project
38	Solano County Water Agency	Source water protection for Delta water sources	This project consists of various improvements such as best management practices, source water protection, and others to reduce the impact of point and non-point sources that could negatively impact Delta water quality, with a particular emphasis on drinking water quality.	\$100,000	Implementable Project
39	Solano County Water Agency	Source water protection for Putah Creek watershed	This project consists of various improvements such as best management practices, source water protection, reduction of in-channel erosion, improved stream channel geomorphology, remediation of historic mining and others to reduce the impact of point and non-point sources that could negatively impact the Putah Creek watershed, as well as the Yolo Bypass.	\$20,000	Implementable Project
42	Solano County Water Agency	Ulatis Flood Control Channel Grade Control	This is a programmatic project to install rock cross-vanes at most remaining bridge crossings to arrest scour and promote some habitat diversity. There are approximately 20 location that would benefit from these installations.	\$500,000	Implementable Project
43	Solano County Water Agency	Wetland Restoration Research and Impacts to Source Water Quality.	The project will consist of scientific study/research on wetland restoration, organic carbon generation, and other important areas of study, to determine the corresponding impacts on municipal source water quality.	\$0	Implementable Project
155	Solano County Water Agency	Lower Putah Creek Restoration: Monticello Dam to Dry Creek	The project restores over 600 acres of riparian forest along nine river miles (30% of the length and area of the riparian corridor) from Monticello Dam to Dry Creek (see Figure 1) replacing 223 occurrences of invasive weeds (20 net acres) with weed resistant native vegetation, restoring natural channel form and function including meander form and pool-riffle-run sequence to 2,400 feet of channel, creating 12 new salmon spawning riffles, grading 45 acres of floodplain to functional elevation, converting 3 acres of excess open water to floodplain, lowering water temperatures and adding an acre of shaded riverine habitat.	\$666,666	Implementable Project
156	Solano County Water Agency	Solano and Napa County Drought Relief Project	This project offers drought relief and long-term water savings in the form of a package of water conservation programs to improve water use efficiency throughout eastern Solano County and unincorporated Napa County. The programs include 1) Water-Efficient Landscape Rebates, 2) Weather-Based Irrigation Controller Rebates, 3) High-Efficiency Washer Rebates and 4) the installation of High-Efficiency Toilets and Urinals in commercial and multi-family buildings.	\$500,000	Implementable Project
156	Solano County Water Agency	Solano and Napa County Drought Relief Project	This project offers drought relief and long-term water savings in the form of a package of water conservation programs to improve water use efficiency throughout eastern Solano County and unincorporated Napa County. The programs include 1) Water-Efficient Landscape Rebates, 2) Weather-Based Irrigation Controller Rebates, 3) High-Efficiency Washer Rebates and 4) the installation of High-Efficiency Toilets and Urinals in commercial and multi-family buildings.	\$500,000	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**



Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
187-YS	Solano County Water Agency	Winters Bioswales Project and Habitat Enhancement	Stormwater from the town of Winters drains residential areas, business districts, and undeveloped lands into a culvert system that delivers contaminated runoff to Putah Creek and one of its major tributaries, Dry Creek. Eighteen discharge points exist, eight of which are connected directly to Putah Creek, the remaining to Dry Creek. Three main culvert delivery sites occur within the Winters Putah Creek Nature Park (WPCNP), draining approximately 200 acres of impervious lands. The stormwater network drains streets, parking lots, businesses and suburban lots, over-irrigated landscapes and disturbed lands, carrying sediment, petroleum products, fertilizers, pesticides, and bacteria into Putah Creek. We have assembled numerous stakeholders to begin addressing this water quality issue and are developing seasonal wetland (bioswale) water treatment projects within the WPCNP that will improve water quality, enhance floodplain function, restore wildlife habitat, and provide educational opportunities for the Winters community. By redirecting this stormwater runoff onto newly constructed floodplains of Putah Creek, water quality contaminants can be decreased through the breakdown action of sunlight, soil, plant roots and microorganisms. Moreover, the redirected water can assist in rehydrating portions of the floodplain during periods of drought and enhance riparian plant growth for the benefit of corridor wildlife. Each culvert outlet, along with the receiving floodplain landscape requires novel designs to redirect, capture, and infiltrate stormwater, all involving site-specific earthworks, specialized soil treatments, appropriate vegetation, monitoring, and post-installation management. We are conducting feasibility analyses and developing designs for the three major culvert networks within the park. We anticipate moving forward with implementation of our first site in Summer, 2018. Along with stormwater treatment and creekside improvements, we intend to develop a community outreach component that will educate people on "Upper Watershed" creek care within the suburban areas that comprise the stormwater drainage networks.	\$195,328	Implementable Project
24	Solano County Water Agency	Commercial Washer Rebate Program	This program will offer financial incentives to commercial customers (businesses, multi-family units) who purchase or lease (five-year lease) select commercial washers for commercial laundry or common area multi-family installations.	\$245,000	Planning
106	Solano Resource Conservation District	Waterway Management for Improved Water Quality and Wildlife Habitat	Solano Resource Conservation District will work with partners and landowners to demonstrate integrated waterway and levee management.	\$500,000	Conceptual
105	Solano Resource Conservation District	Solano County Riparian Habitat Restoration and Enhancement Project	The project will work to improve riparian habitat and reduce noxious weed cover in Eastern Solano County creeks.	\$750,000	Implementable Project
192	Solano Resource Conservation District	Barker Slough Water Quality and Habitat Restoration Project	Barker Slough is part of the North Bay Aqueduct (NBA), providing drinking water for up to 500,000 people in urban areas of Napa and Solano Counties. It is also a major tributary to Lindsey Slough, part of the Cache Slough complex of the Sacramento-San Joaquin River Delta. Nearly all of its length is ranched, and in many areas, cattle have free access to the slough. The water coming from the slough has been shown to have high amounts of organic carbon, bacterial coliform, turbidity and salts that exceed drinking water standards. Past projects have attempted to fence cattle off the slough and allow water quality to improve, but these have not been well maintained and cattle continue to degrade water quality. This project would install/repair fencing and off-stream cattle troughs at multiple project sites along Barker Slough, and install native riparian vegetation in this currently denuded watershed. A total of 5 stream miles will be fenced off from cattle and 5 acres of riparian habitat will be restored. In addition, a Barker Slough Watershed Management Plan will be created to bring ranchers, landowners, and urban water users together to identify priority projects that will improve and maintain water quality.	\$300,000	Implementable Project
197	Solano Resource Conservation District	Cronin Ranch Habitat Corridor Project	This project aims to create habitat connectivity by planting native perennial grasses, trees and shrubs along more than 4 miles of irrigation and drainage canals that interlace the 2,200 acre Cronin Ranch. This project would connect other habitat restoration projects previously established by Solano RCD, and create over 35 acres of new riparian corridors in a landscape dominated by little more than irrigated pasture and hay fields. New fencing would be installed to exclude cattle from waterways, thereby reducing sediment loads and fecal contamination in waters that drain to the Lower Sacramento River. Native perennial grasses will filter out nutrients and sediment from irrigated pasture tailwater and reduce erosion and bank sloughing along waterways. The deep root systems of native grasses, shrubs and trees increase water infiltration and storage, while also sequestering carbon deep into the soil profile.	\$592,000	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**



Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
198	Solano Resource Conservation District	Ulatis Creek Riparian Floodplain Restoration Project	This proposed habitat restoration project would be a partnership between the landowner, SRCD and agency partners to control non-native weeds and restore 35 acres of unique riparian floodplain habitat to perennial grasses, forbs, trees and shrubs. The project will plant native species of plants that are well adapted to the local hydrology and soil conditions on 35 acres of Delta riparian floodplain. The project will result in the increase in diversity and richness of native species vegetation that would improve the habitat and attract a myriad of local wildlife throughout the year. This project is designed in such a way that the primary function of the channel as a flood control feature is not compromised. Water quality will be improved by maintaining perennial ground cover that will serve as erosion control and as a filter. Occasional grazing by livestock will be an important management tool for maintaining the site long term to reduce excessive thatch build-up and to manage the acceptable level of woody vegetation by the local managing flood control agencies. This project will remain part of the working agricultural landscape, managed long term by Emigh Livestock (landowner) following the operating and maintenance easement guidelines of the channel area by the Solano County Water Agency.	\$350,000	Implementable Project
200	Solano Resource Conservation District	Centennial Park Pine Creek and Wetlands Habitat Restoration Project	This project will cleanup and restore wildlife habitat, while attenuating high flood events and filtering excessive eroded sediments at a 26 acre riparian creek and wetland complex located at the southern end of Centennial Park in Vacaville. Project activities include:-Removing all trash and concrete debris from 26 acres-Re-shaping and contouring the wetland area to promote plant diversity, natural wetland function, and diversity of wildlife habitat- Controlling invasive noxious weeds (including arundo, stinkwort and perennial pepperweed) on 26 acres- Planting 1,000 native trees/shrubs and seeding 10 acres of native grass and wildflowers along Pine Creek and its associated upland terraces, creating 2,000 feet of native riparian corridor.- Planting 500 native trees/shrubs and 20,000 native rush and sedge plugs in the wetland basin, creating 16 acres of native wetland marsh habitat.- Installing a 1,500 foot long asphalt walking trail and three interpretive panels along the north side of Pine Creek so that park visitors can experience and learn about riparian and wetland ecology	\$600,000	Implementable Project
199	Solano Resource Conservation District	Solano County K-12 Watershed Education in the Sacramento River Watershed	Enhance and expand existing watershed education programming for K-12 students to support personal stewardship behavior and understanding of Sacramento River conservation and restoration goals. This program encompasses two place-based field trip programs: the Watershed Explorers program for third graders and the Solano County Biomonitoring program for high school students, as well as the multi-grade Solano Water Education Program that provides Project WET training and resources to teachers along with targeted water resource lessons, field trip opportunities and classroom supplies. Programming provides education about water conservation, proper used oil disposal, water quality assessment and protection, the Reduce-Reuse-Recycle ethic, native species protection, and the fun and health values of being outdoors in the watershed. By learning about watershed ecology, phenology, biomonitoring, resource conservation, and restoration work, participants understand the important relationship between science and the necessary environmental stewardship of the Sacramento River watershed. We work with Solano County, its cities, county and regional resource agencies, and local businesses to provide context and connection to ongoing local, regional and state environmental stewardship challenges. We formally assess student learning, and use the information we gain to refine and improve our programs.	\$10,000	Planning
80	Tuleyome	Cache Creek Anadromous Fish Reintroduction Project	Conduct studies to look at the physical constraints such as temperature, flow regimes, and spawning opportunities, climate change impacts for the reintroduction of anadromous fish to Cache Creek, institutional issues including safe harbor for the YCFCWCD and stakeholder outreach.	\$500,000	Feasibility Study
108	Tuleyome, Inc.	Sulphur Creek Mercury and Sediment Reduction Project	This project will: 1) Characterize mercury as required to enable erosion control work, 2) Hydrologically disconnect up to 23 miles of road networks that are currently contributing runoff and contaminated sediment to downstream waters, 3) Stabilize 2000 feet of eroding stream banks that are over-steepened and delivering methylmercury contaminated sediment into the stream system, 4) Treat 115 road-related erosion and sediment delivery sites and 5) Stabilize three major valley bottom headcuts that are resulting in serious valley fill erosion along the main stem Sulphur Creek, desiccating alkali wet-meadows and lowering the water table.	\$900,000	Implementable Project
152	Tuleyome, Inc.	Corona & Twin Peaks Mines Cleanup	The principle physical improvements that this project will implement include a novel, low-maintenance, in situ treatment system to reduce acidity and metals loadings from the Corona Drain Tunnel, consolidating mine waste, improving runoff controls, enhancing revegetation of waste rock and tailings at the Boiler House Adit and Twin Peaks Adit, and improving the existing infiltration trenches at the Boiler House Adit and Twin Peaks Adit. This project will address several key issues commonly associated with mine cleanup projects, including:- Physical hazards: Restricting access to the adits and infiltration trenches by people and wildlife- Chemical hazards: Treating mine drainage and site seepage/runoff to attain water quality standards- Legal liability: Protecting "Good Samaritans" who implement projects or manage lands for the good of society- Multiple goals: Seeking multiple benefits (public health & safety, wildlife habitat, cultural resources, etc.) while addressing competing interests- Limited funds: Minimizing remediation costs to encouraging similar efforts elsewhere.	\$1.6 million	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
81	Tuleyome, Inc.	Comprehensive Mercury Assessment and Implementation for the Westside Region	This project will: 1) compile and georeference existing data pertinent to characterization of known and potential mercury priority areas in the Westside Region 2) monitor streambeds within the Putah Creek Watershed 3) upload relevant data into a regional or statewide on-line library 4) develop a summary 5) develop best management practices toolkit 6) identify 2-3 feasible priority projects and 7) develop implementation measures using the Toolkit and decision support tools.	\$492,000	Planning
109	Tuleyome, Inc.	Elgin Mine Drainage Water Treatment Project	Compile existing maps, reports, water data, and other information about Elgin Mine in the IRWM region indicating location, ownership history, and mineral production. Address all regulatory requirements, Conduct baseline and post-project monitoring of downstream water, sediment, and biota. Design and construct a hot spring treatment system to minimize mercury loads downstream.	\$1,500,000	Planning
171-YS	University of California, Davis	Agricultural Stormwater Improvements	Agricultural runoff currently enters the storm drain system directly. This projects would create retention basins and vegetated ditches to collect stormwater and irrigation runoff along edges of agricultural fields.	\$250,000	Implementable Project
172-YS	University of California, Davis	Arboretum Waterway Wetland Restoration and Enhancement	UC Davis is proposing to enhance the Arboretum Waterway, which captures stormwater discharge from 900 acres of the UC Davis campus, by establishing a wetland area to treat stormwater discharge and recycled water prior to discharge to Putah Creek. This project will include establishing wetlands, increasing stormwater retention, slope stabilization, enhancing a recreation area for the public, utilization of recycled water for irrigation, and creating public education opportunities.	\$4 million	Implementable Project
82	West Lake Resource Conservation District	Non-Native Invasive Weed Management Project	This project will maintain the existing weed management program currently being implemented by the Lake County Weed Management Area.	\$0	Implementable Project
1	West Sacramento Area Flood Control Agency	Bees Lakes Preserve	Conserve and develop limited, low-impact pedestrian-only recreational access to a 23-acre open space area containing sensitive aquatic, riparian, emergent and upland habitats which are associated with the Sacramento River.	\$1,000,000	Feasibility Study
83	West Sacramento Area Flood Control Agency	Lower Sacramento and Delta North Regional Flood Management Plan	Develop a lower Sacramento and Delta North Regional Flood Management Plan that follows the requirements outlined in the Central Valley Flood Protection Plan (CVFPP)	\$1,734,907	Implementable Project
111	West Sacramento Area Flood Control Agency	Deep Water Ship Channel East Levee Repair	Correct deficiencies, protect against underseepage, and maintain the Port of West Sacramento levees to current standards for FEMA 100 yr and urban levee 200 year levels of flood protection.	\$7,676,000	Implementable Project
112	West Sacramento Area Flood Control Agency	Deep Water Ship Canal Navigation Levee Repair	Correct deficiencies, protect against underseepage, and maintain the Deep Water Ship Canal Levees to current standards for FEMA 100 yr and urban levee 200 year levels of flood protection.	\$181,018,000	Implementable Project
113	West Sacramento Area Flood Control Agency	Port of West Sacramento North and South Levee Repair	Correct deficiencies, protect against underseepage, and maintain the Port of West Sacramento levees to current standards for FEMA 100 yr and urban levee 200 year levels of flood protection.	\$58,400,000	Implementable Project
114	West Sacramento Area Flood Control Agency	Sacramento River Levee Repair	Correct deficiencies, protect against underseepage, and maintain the Sacramento River Levees to current standards for FEMA 100 yr and SB 5 200 year levels of flood protection.	\$250,000,000	Implementable Project
115	West Sacramento Area Flood Control Agency	Sacramento River Recreational Trail	Construct a continuous 13.1 mile, 192-acre recreation corridor along the entire length of the Sacramento River within City limits.	\$80,000,000	Implementable Project
116	West Sacramento Area Flood Control Agency	Sacramento Bypass-Yolo Bypass Levee Repair Phase II	Correct deficiencies, protect against underseepage, and maintain the Sacramento Bypass and Yolo Bypass Levees to current standards for FEMA 100 yr and urban levee 200 year levels of flood protection.	\$60,900,000	Implementable Project
117	West Sacramento Area Flood Control Agency	West Sacramento South Cross Levee Repair	Correct deficiencies, protect against underseepage, and maintain the West Sacramento South Cross Levee to current standards for FEMA 100 yr and urban levee 200 year levels of flood protection.	\$14,605,000	Implementable Project
132	Yolo Basin Foundation	Lower Putah Creek Restoration from Toe Drain to Putah Creek Diversion Dam (Yolo Bypass Wildlife Area Element)	The project will enhance and restore 300-700 acres of tidal freshwater wetlands and create 5 miles of a new creek channel, entirely within the Yolo Bypass Wildlife Area.	\$1,000,000	Implementable Project
133	Yolo Basin Foundation	Yolo Bypass Wildlife Area Public Use Improvements	This proposal would complete some of the tasks related to enhancement of public use infrastructure; including maintain and improve wildlife observation, angling and hunting.	\$1,000,000	Implementable Project
131	Yolo Basin Foundation	Pacific Flyway Center/Delta Gateway	The Pacific Flyway Center (Center) is a proposed educational facility and site intended to serve the general public, Central Valley area school districts, various public sector agencies and special environmentally focused events and activities.	\$13,000,000	Planning
123	Yolo County	Clarksburg Flood Protection Feasibility Study	The project involves conducting a feasibility study of alternatives to provide a 100-year level of flood protection to the Clarksburg region.	\$200,000	Implementable Project
177-YS	Yolo County	Knights Landing Storm Drain Project	Design and construct a new storm drain or culvert in the vicinity of 4th and Railroad streets in the community of Knights Landing. KL has historically experience standing water (localized flooding) in the northern portions of town that can be as deep as 2 feet in wet years. The new storm drainage would convey storm water to the County's existing drainage system on the east side of Railroad Street. Design and construction are proposed to be completed by Public Works.	\$100,000	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**



Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
181-YS	Yolo County	Raise Highway 16 Out of Flood plain	This project was initially proposed by Caltrans as flooding of Highway 16 is a chronic problem. The project was not constructed because of concerns of some farmers about grades at farm road crossings. Raising Highway 16 creates a barrier that could be used to store storm water north of the highway in detention basins/recharge ponds. Increasing the capacity of Willow Slough south of Highway 16 west of Madison is needed so that flows can be conveyed to the detention basins. Willow Slough is the source of the majority of flooding in Madison. Cottonwood Slough contributes to occasional flooding (last time was 1996) in Madison. This project could be coordinated with the Madison Canals project as other upstream diversions could benefit this project and/or the planned detention basins could be coordinated.	To be determined	Implementable Project
120	Yolo County	Yolo County Airport Drainage Plan	In order for the airport to eliminate flooding of its facilities and to expand, a 2005 Drainage Plan engineered by Wood Rogers needs to be implemented.	\$1,250,000	Planning
125	Yolo County	Methylmercury Impacts Analyses for the Yolo Bypass	Yolo County proposes to collect data and analyze changes in methyl mercury production and bioaccumulation that could result from (1) a proposed Bay Delta Conservation Plan (BDCP) project to enhance fisheries habitat in the Yolo Bypass; and (2) a Central Valley Flood Protection Plan proposal to expand the Yolo Bypass to improve flood capacity.	\$100,000	Planning
184-YS	Yolo County FCWCD with Madison CSD	Upstream Flow Management to Prevent Madison Flooding and to Facilitate GW Recharge	The District proposes to manage high flows from Lamb Valley, Cottonwood and S. Fork Willow Sloughs using the existing canal system as well as other means such as upstream check dams. During storm events Willow Slough floods the Town of Madison. The Canal system can be used to convey water away from the Town of Madison and reduce flood levels while also managing peak flows through use of check dams, particularly in Lamb Valley Slough. Flow and water level monitoring could serve several purposes. GW recharge can be accomplished through canal bottoms and potential recharge/detention basins. P. 29 and 30 of the 2012 FIS describe some of the upstream channel capacity limitations and a review of FIRM maps shows several points of intersection between the sloughs and canals to be explored. This project can be coordinated with Raising Highway 16 project.	To be determined	Implementable Project
179-YS	Yolo County FCWCD with Madison CSD	Madison Drainage Study	This project would model new underground drainage facilities for the entire Town of Madison to determine location(s) for outfall (possibly Cache Creek, the South Fork Willow Slough or Cottonwood Slough). Preliminarily it is estimated that the underground drainage facilities would be sized for 110 cfs of storm flows and the system outfall would need to be sized accordingly to prevent backup of the system. Outfall locations would also need to be evaluated to determine if the downstream capacity would be sufficient to convey this additional flow during storm events. LID strategies will be used to ensure discharge water quality does not negatively impact downstream water quality.	\$100,000	Planning
118	Yolo County Flood Control and Water Conservation District	Conjunctive Water Use Program	This conjunctive water use project envisions using a variety of methods (recharge/recovery, off-stream storage and canal system modernization) to effectively store and conjunctively use groundwater in the District's service area.	\$8,000,000	Implementable Program
84	Yolo County Flood Control and Water Conservation District	Winters Main Canal Modernization Project: Integrated Precision Water Mgmt.	Installation of automatic water control gates, pump flow meters and vegetated native grass canal banks, to improve irrigation efficiency. In addition, planting of native grasses to minimize erosion and decrease use of herbicides.	\$2,175,000	Implementable Project
85	Yolo County Flood Control and Water Conservation District	Abandoned Well Incentive Program	Development of a Regional 3 year Abandoned Well Incentive Program to properly abandon wells.	\$2,200,000	Implementable Project
119	Yolo County Flood Control and Water Conservation District	Moore Siphon Reliability/Restoration Project	Due to the age and exposure of the 72" corrugated metal pipe, as well as Cache Creek erosion issues at both ends of the siphon, the siphon well either need to be replaced or rehabilitated in the near future.	\$1,000,000	Implementable Project
151	Yolo County Flood Control and Water Conservation District	Regional Drought Preparedness through Increased Groundwater Recharge	The District proposes to divert winter flows from Cache Creek into the canal system to increase groundwater recharge. Groundwater recharge and recovery is central to good conjunctive management of surface and groundwater resources. Currently, by District policy, 160 miles of surface water canals remain unlined, providing summertime groundwater recharge services that benefit the aquifer and riparian habitat. The recharged groundwater is used by farmers, individual well owners and business, cities, and small communities. Normally, the majority of canal recharge occurs in the summertime, during the irrigation season. This project proposes to divert wintertime water into the canal system which would require the installation of automated canal gates to replace manual gates. This project will improve local water supply reliability during times of drought and improve conjunctive use management overall. The District has been building and planning improvements to its conjunctive use system for many decades. The regionally supported groundwater monitoring program is extensive. The ag/urban partnership between the cities of Davis, Woodland, and Winters and the Water District is strong. Indeed, the Cities depend on the recharge activities of the District to maintain their water supplies. The disadvantaged communities (DAC) in the western half of the District also depend exclusively on groundwater. The installation of automated gates to make winter recharge possible will increase groundwater storage and will benefit the community for years to come.	\$3.0 million	Implementable Project
175-YS	Yolo County Flood Control and Water Conservation District	Flood Monitoring Network Project	Project installs flow monitoring stations at canals and sloughs in order to optimize conveyance capacity for both agricultural operations or during rain events, which could occur at the same time. It is not known how much flow sloughs contribute to the canal systems during rain events.	\$0	Implementable Project

**Table D-4: Westside IRWM Plan Project Screening Results
(sorted by Lead Agency, then Project Type)**

Project No.	Lead Agency /Organization	Project Title	Planned Project/Program Types and Activities	Project Cost	Project Type
176-YS	Yolo County Flood Control and Water Conservation District	Forbes Ranch Regulating Pond	Develop and construct a 200 acre-feet regulating pond to reduce drainage and flood waters through the town of Madison and District canal system. Divert stormwater flows to the pond through the existing conveyance. The regulating pond would provide storm water retention during the winter and would allow for groundwater recharge in the spring and summer when capacity and water is available. The regulating pond would provide water quality benefits by allowing the sediments in the runoff to settle and lessening the transfer of pollutants and chemicals downstream. The surrounding area would have native vegetation that would promote benefits for wildlife habitat, and the property would allow for groups to visit and learn about the multi-functional project. Similar to the District's Chapman Reservoir, we would install automated gates and monitoring devices at the regulating pond that would be connected to the District's SCADA system for real-time management.	\$700,000	Implementable Project
185-YS	Yolo County Flood Control and Water Conservation District	West Adams Canal Renovation and China Slough Rehabilitation Project	Enlargement and improvement of the Yolo County Flood Control & Water Conservation District's (District) West Adams, East Adams, and Acacia Canal system, and rehabilitation and improvement of China Slough (a natural storm drainage channel). The District's canal system would need to be modernized to allow for a "demand" system and to ensure no spills. China Slough would need to be cleaned, an operating road constructed, and installation of about eight check structures. Improvements to the canals and slough would be implemented to convey 10,000 acre-feet of surface water per year through China Slough to farmers in the Yolo-Zamora region (~4,200 acres).	2017\$ (15,671,929)	Implementable Project
188-YS	Yolo County Flood Control and Water Conservation District	Winters North Area Stormwater Pond	Develop and construct a 5,000 acre-feet stormwater retention pond in the north area of Winters to reduce drainage and flood waters from the Chickahominy Slough. The retention pond would also be used for groundwater recharge in times when the capacity and water was available. The retention pond would provide water quality benefits by allowing the sediments in the runoff to settle and lessening the transfer of pollutants and chemicals downstream. The surrounding area would have native vegetation that would promote benefits for wildlife habitat, and the property would allow for groups to visit and learn about the multi-beneficial, multi-agency partnership. Similar to the District's Chapman Reservoir, we would install automated gates and monitoring devices at the retention pond that would be connected to the District's SCADA system for real-time management.	\$0	Implementable Project
189-YS	Yolo County Flood Control and Water Conservation District	Yolo County Drains and Sloughs -- Governance and Maintenance Study	Plan that will identify governing bodies and maintenance responsibilities involved in the County's drains, canals, and sloughs. The District and County will work together to develop a governance and maintenance study that will assist in providing effective rural storm water management responsibilities based on the defined governing bodies. Plan/investigation will initiate a legitimate storm water management program in Yolo County.	\$150,000	Planning
126	Yolo County Resource Conservation District	Implementation of the Cache Creek Watershed Invasive Weed Management Plan	The newly completed Cache Creek Watershed Invasive Weed Management Plan (CCW-IWMP), a living document, identifies specific invasive plants for either eradication, containment or monitoring and prioritizes weeds within those categories. Starting in the upper watershed and working downstream we will use weed mapping information to eradicate those which can be eradicated, contain the edges of those identified in that category, and monitor so as to continually update the plan and re-prioritize and implement vegetation management actions.	\$250,000	Implementable Project
127	Yolo County Resource Conservation District	Agricultural Drain, Slough and Canal Riparian Habitat Enhancement	Control of invasive weeds, site preparation, installation of native trees, shrubs, grasses and/or forbs as appropriate to the site, and 2 years of vegetation management/ maintenance post-plant along natural and man-made waterways, with focus on Cottonwood, Union School, Willow and Chickahominy sloughs; and main irrigation supply canals in western Yolo County.	\$750,000	Implementable Project
86	Yolo County Service Area #6	County Service Area (CSA) #6 Levee Repair Project	Non-urban levee repair project as part of the levee rehabilitation identified to restore the District levee to its authorized level of flood protection.	\$3,222,450	Implementable Project
122	Yolo County, Natural Resources Division	Cache Creek Parkway Plan	Once complete the Plan will result in a comprehensive planning document that will guide the restoration and ultimate uses of County owned lands within the Cache Creek Area Plan boundary.	\$300,000	Implementable Project
178-YS	Yolo County/	Knights Landing Underground Drainage Study	This project would model new underground drainage facilities for the entire Town of Knights Landing to determine location(s) for outfall to the Sacramento River or Ridge Cut Slough. Preliminarily it is estimated that the underground drainage facilities would be sized for 30-50 cfs of storm flows and the system outfall would need to be sized accordingly to prevent backup of the system. Outfall locations would also need to be evaluated to determine if the downstream capacity would be sufficient to convey this additional flow during storm events. LID strategies will be used to ensure discharge water quality does not impact the Sacramento River or Ridge Cut Slough water quality.	\$100,000	Planning