Merced IRWMP Update 2018
Project Summary

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Construction	Planning	The project entails construction of a regulating/recharge basin. The basin will be excavated, and automated inlet and outlet gates will be constructed along with the necessary flow measurement and control. The overall footprint of the project site is estimated at 20 acres, and the basin will occupy approximately 15 acres. These numbers are approximate and will be solidified at a later date. The project will provide groundwater recharge in the area and also serve as a regulating reservoir to be used by MID operations personnel.	Water Supply	66
Ballico Community Water Service District 2nd Well Proposal funding	Ballico Community Water Service District	Construction	Conceptual	The Ballico Community Water Service District is in major need of funding to construct a second well and comply with state law. Currently there is only one well supplying water to the community of about 72 houses and the Ballico School and fire department. The current well is over 25 years old and in need of maintenance as well. Also according to enviromental health department the water supply lines need replacement soon due to being too old. The district currently only has enough funding to sustain itself.	Water Supply	68.25
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Construction	Planning	Bear Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Bear Reservoir and downstream levee and channel improvements would increase the level of flood protection to the most populated areas of Merced County. Bear Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	55.75
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Construction	Conceptual	MID's Le Grand Canal is a critical flood control facility capable of conveying water from the Lake Yosemite watershed. The canal originates at Lake Yosemite and terminates around the town of Le Grand, however during flood season it is intercepted midway by a coffer dam along with a breach, created by MID, at its crossing with Black Rascal Creek that diverts all drainage to the creek. The Le Grand Canal contributes up to 600 CFS of floodwater to Black Rascal creek. Without an existing flood control reservoir on Black Rascal Creek, the Lake Yosemite flood flows pose significant flooding risks to the City of Merced, adjacent unincorporated areas, and several communities downstream of Merced. Additionally, breaching of the canal prevents flows from continuing downstream within the canal, depriving agricultural areas of precious storm water supply. This project proposes a set of gates in the canal to replace the breach which is installed annually, allowing MID to redirect and control flood flows. This proposed control structure can also be utilized to send flood flows on alternate, longer routes creating an artificial offset to the timing of peak storm flows as well as permit storm flows to be directed to alternate creeks and artificial groundwater recharge areas. The potential for groundwater recharge cannot be understated as the Le Grand Canal supplies a large area that has historically faced declining groundwater levels and limited recharge.	Water Supply	73.25
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Design	Construction of a regulating reservoir on Black Rascal Creek. Project location is immediately north of Yosemite Avenue and Arboleda Drive in northeast Merced. Project will provide protection against a 200-year storm event and will provide much needed flood control on the currently unprotected Black Rascal Creek Watershed. Project will be beneficial to the project area and also to all downstream areas. The reservoir will maintain a deadpool for wildlife purposes. During the flood season, the reservoir will act primarily as a flood control retarding basin. During the irrigation season, the reservoir will regulate irrigation flows thereby increasing Merced Irrigation District system water efficiency without impacting power generation scheduling at New Exchequer Dam with the Independant System Operator (ISO).	Flood Management	85
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Burns Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Burns Reservoir and downstream levee and channel improvements would increase the level of flood protection to the most populated areas of Merced County. Burns Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	55.75

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Cash for Grass Pilot Program to Eliminate Wasteful Pollution Containing Water Run-off	City of Merced	Conservation/ Protection/ Restoration	Design	To educate about storm drains carrying pollution to creeks and begin a pilot program in the City of Merced to rebate water customers for converting their grass landscape into water efficient xeriscape with water efficient changes to their irrigation systems to eliminate pollution containing run-off. Xeriscape refers to landscaping in ways that reduce or eliminate the need for supplemental water from irrigation. Polluted run-off from urban landscapes goes into storm gutters and drains which flow to creeks; primarily Bear Creek and Black Rascal Creek. Excess irrigation of turf leads to increased water consumption, increased costs, it depletes our water supply and its run-off pollutes creeks. The program will serve to educate the public about storm water pollution and rebate them for converting grass and old irrigation systems into qualifying xeriscape with water efficient drip irrigation systems that will pollute less and save more water.	Environment	71.75
City of Merced Stom Drain Master Plan Update	City of Merced, MID	Plan Development	Planning	The City of Merced is seeking to prepare a revised Storm Drain Master Plan based upon the City's updated General Plan (Merced Vision 2030). The City Storm Drain last master plan was developed in 2002. Since then, the City's drainage system has been expanded and upgraded. The revised Storm Drain Master Plan will identify capacity deficiencies in several major segments of the City's storm drain system particularly with those areas of the system that rely intricately upon the Merced Irrigation District (MID) canal system for stormwater conveyance. The City will also look at ways to utilize storm runoff capture for groundwater recharge and reuse as irrigation water. The purpose of updating the storm drain master plan is to incorporate all of the projects completed since the last master plan was prepared into an updated storm drain computer model and master plan document, and to identify and prioritize a new set of storm drain projects to further improve the storm drain system in the City. The prioritized set of storm drain improvement projects for future funding.	Flood Management	86
Crocker Dam Modification	Merced Irrigation District	Construction	Conceptual	This project encompasses installation of automatic gates at MID's Crocker Dam, located just west of Merced at the bifurcation of Black Rascal Creek and Bear Creek. Crocker Dam is a fixed structure with removable plates that are installed every spring (sometimes multiple times depending on late rains) to raise the water level to allow irrigation diversions. The current configuration severely limits the operational flexibility and control over this facility, as the gate is primarily either "up" or "down," and opening or lowering the gate is a difficult task. It is proposed to replace these plates with automatic gates. The automatic gates would allow for MID to remotely operate the dam and adaptively manage the flows in Bear Creek/Black Rascal Creek. This would provide improved flood control downstream, water storage, and be a supply for groundwater recharge from stormwater (FloodMARS).	Water Supply	64.25
Design and Construction of Fish Screens at Merced River Diversions	California Department of Fish and Wildlife	Conservation/ Protection/ Restoration	Conceptual	Various Locations: Cuneo Ditch (RM 50.5), Canevaro Ditch (RM 48.9), Cowell (RM 45.2) and the Cowell#2 (RM 38.1) diversions are all in need of screening designs to minimize the instream maintenance currently required for proper function of the diversions, and to meet federal fish agency screen requirements to protect juvenile salmonids (salmon and steelhead) from being entrained into the diversions. This project proposes the design, permitting and installation at fish screens that will reduce the annual maintenance requirements as well as protect juvenile migratory fishes (salmon and steelhead)	Environment	48.25
Drought Tolerant Landscape Conversion	City of Merced	Construction	Planning	The City of Merced has over 400 acres of landscaped maintenance districts, parks, medians, and park strips requiring irrigation. All of these areas are on metered water and are funded by the General Fund. Converting center medians and strips of irrigated land is particularly important now that we are working to Make Water Conservation A Way Of Life in California. Legislation that came about during the severe drought years says that we may not irrigate ornamental turf unless it is a by-product of watering trees. Some areas of center medians were converted to drip irrigation and there are many other areas that could benefit from being replaced with drought tolerant landscape to promote less water use.	Community Stewardship	55.5
El Nido Recharge Basin	Merced Irrigation District	Construction	Conceptual	This project entails construction of additional recharge basins in El Nido. Work will include purchase, design of the recharge basin, design of the water conveyance facilities, design of the monitoring network and data collection program, and development of operations guidelines. Based on the design, permits and approvals will be obtained prior to construction. Construction activities include construction of the basin, construction of the recharge facilities, drilling of monitoring wells, installation of flow meters and check structures, and surveying. After construction the basin will be monitored for two years to gage the success of the basin and modify the operations guidelines if necessary.	Water Supply	69
Exchange Recycled Water for Surface Water in Parks	City of Merced	Demonstration Project	Conceptual	This project would take parks off of municipal groundwater and replace the irrigation with surface water. The City would provide recycled water to tne irrigation district in exchange for the surface water that would be used to water the parks. Initially it would be a demonstration project at a single project and could be expanded to other city parks as a water exchange program.	Environment	53.5

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Construction	Conceptual	This project will consist of flood flow capacity improvements and canal automation which is essential for implementing Flood-MAR projects and conveying water to MID's existing El Nido Groundwater Recharge Basin. Additionally, canal automation will improve flood control operations especially when spring storms overlap with the irrigation season. During flood season, canal automation can also be used to turn the canals into mini flood control reservoirs, filling each pool level and storing water for release when safe. This will essentially, create miles of flood control storage. These types of operations are currently not possible as the conveyance system is over a century old and requires frequent manual adjustment for flow fluctuations. The Fairfield and El Nido Canal system can convey water to over 52,000 acres. This project would open that acreage up to potential groundwater recharge and flood control projects. During the irrigation season, canal automation will also help to reduce spills conserve water.	Water Supply	64.25
Lake Yosemite Booster Pump Station	Merced Irrigation District	Construction	Conceptual	Lake Yosemite receives inflows from MID's Main Canal. It has four primary outlets; the Tower Lateral, the Sells Lateral, the Fairfield Canal, and the Le Grand Canal. During winter operations, the lake level is so low that only the Tower Lateral can be used for outflow (unless a major storm event occurs) due to the other 3 canal headgates having a higher invert. This project entails installation of booster pump station to allow for full utilization of Lake Yosemite's storage capacity and diversion facilities. The Booster pump would permit MID to move Lake Yosemite water to other portions of the district and be a key tool in implementing Flood-MAR projects.	Water Supply	70.25
Le Grand-Athlone WD Surface Water Extension	Le Grand-Athlone Water District	Construction	Conceptual	Build conveyance infrastructure from MID's booster 3 or another facility southeast, eventually connecting to Chowchilla Water District facilities near the intersection of the Madera Canal and the Chowchilla River. The connection would allow flexibility in distributing flood and other types of water in the Exchequer and Friant systems. Surface water would be available to Merced SOI growers, Plainsburg Irrigation District, LeGrand-Athlone Water District, Sandy Mush Mutual Water Company and others that predominantly use groundwater only.	Water Supply	61.75
Livingston Canal Lining Project	Merced Irrigation District	Construction	Construction	The project will line a portion of the canal section of the Livingston Canal through the City of Atwater. The Livingston Canal is both a stormwater facility and irrigation facility.	Flood Management	52
Lower Merced River Stewardship Program Round 2	East Merced Resource Conservation Districts	Education	Planning	The purpose of this project is to improve watershed health through education and restoration (on Bear Creek). This project will focus on educating the public (e.g. farmers, students, educators, community representatives) on environmental issues pertaining to watershed health in Merced County along with removing Arundo around Bear Creek. We will host a variety of events such as; workshops, presentations, kayak clean-up/water quality monitoring days, tours and an after school natural resource program. By targeting a large focus group we hope to bring community awareness on environmental issues facing our local watersheds.	Community Stewardship	68
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Construction	Conceptual	This project entails retrofitting the head gates of the main canal for seismic purposes. The Main Canal serves approximately 150,000 acres in the MID place of use.	Water Supply	49.75
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Feasibility Study	Conceptual	Perform a study on a 10,000 AF offstream regulating reservoir.	Water Supply	80.75
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Mariposa Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Mariposa Reservoir and downstream levee and channel improvements would increase the level of flood protection to Planada and Le Grand. Both are DAC's in Merced County. Mariposa Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	55.75

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McCoy Lateral Regulating Basin	Merced Irrigation District	Construction	Conceptual	This project includes constructing and integrating a regulating basin near the termination of Merced Irrigation District's (MID) McCoy Lateral, the furthest southwestern operational discharge location in the District. MID is required to provide Stevinson Water District with 24,600 AF annualy. The McCoy Lateral is currently one of the waterways in which water is delivered to Stevinson Water District. This basin will increase water supply management through increasing the efficiency, consistency and reliability of deliveries to MID Growers and Stevinson Water District. The project will also allow for the increase in the amount of flows traversing the westerly region of MID, thereby improving the water quality in the area in terms of temperature, decreased algae growth, PH balance and overall suitability for agricultural and landscape use.	Water Supply	60.5
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Data Management	Conceptual	The goal of the Land Management and Multi-Benefit Assessment is to provide Merced County and the California Department of Conservation with a decision-support tool and accounting framework to assess the climate and multiple benefits that may be achieved through a variety of land use, land management and conservation activities. These benefits may be linked to future planning efforts in Merced County and financial incentives available through state programs.	Environment	30.5
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Plan Development	Conceptual	This project consists of LIDAR data of the Merced Groundwater Subbasin. This data will be used in conjunction with weather forecast data to predict local stormflows from rainfall events. The data will be tied to MID's proposed real time modeling of Bear, Black Rascal, and Burns Creeks.	Water Supply	69.75
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Construction	Conceptual	Merced Irrigation District is proposing automation of certain facilities to enhance Flood-MAR capabilities and expand areas which can be recharged with stormwater events. The project consists of automating certain facilities including but not limited to the Washington Lateral, Northside Canal, Livingston Canal, Le Grand Canal, Caton Lateral, Escaladian Canal, Hammett Lateral, Atwater Canal, Cressey Lateral, and Arena Canal. Currently these canals have manual structures which require frequent human adjustment and inputs to safely manage flows. By automatizing these facilities, the district will be able to safely accommodate volatile and unpredictable storm flows while keeping canal levels high enough for Flood-MAR purposes. Additionally, this project will better manage surface water diversions and increase distribution efficiency by reducing spills.	Water Supply	39.25
Merced IRWM Region Climate Change Modeling	Merced Integrated Regional Water Management Authority (MIRWMA)	Feasibility Study	Conceptual	This project will link the existing Merced River PRMS model, developed by the USGS, with the WEAP system model to explore the potential range of climate change impacts the Region may experience and the effectiveness of various portfolios designed to help the region adapt to those anticipated changes. By linking the models, the Region can examine alternative water development and management options under a variety of climate change conditions to facilitate and efficiently evaluate multiple future scenarios. Several potential future scenarios will be assembled to simulate a range of future climate changes. These scenarios will be simulated with different portfolios of water projects in place to evaluate the effectiveness of each portfolio in adapting to the climate changes. The results will inform the Region as to which projects will perform best in terms of adaptive management and will identify areas where additional or different projects should be recommended to meet future needs.	Water Supply	53
Merced IRWM Regional GHG Emissions Inventory	Merced Integrated Regional Water Management Authority (MIRWMA)	Other	Conceptual	This Project has been devised to prepare a region-wide GHG emissions inventory for the Merced Region to establish baseline GHG emissions and to project future emissions under a Business as Usual scenario. This Project follows The Greenhouse Gas Protocol for the U.S. Public Sector, developed by World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), and the USEPA Climate Leaders Guide to Greenhouse Gas Management for Small Business & Low Emitters. The Greenhouse Gas Protocol is the global standard for calculating GHG emissions, and the USEPA guidance incorporates the WRI/WBCSD protocol in the context of U.S. GHG emissions. The results of the GHG inventory can be used to inform the region as to the regional impacts of their current practices on GHG emissions, as a measure against which to evaluate the effectiveness of future projects, and to aid in identifying projects to improve regional energy efficiency and reduce GHG emissions.	Environment	44.5

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Merced Region Climate Change Outreach and Education	Merced Integrated Regional Water Management Authority (MIRWMA)	Education	Design	The project will be implemented by water/wastewater entities in the Region to educate & inform the public about climate change, potential impacts in the region, its effect on water resources, & actions they can take to help adapt to and mitigate for climate changes. The project consists of a school education program to incorporate into existing science curriculums & a public information program. The first project component will consist of classroom presentations, large group assemblies at schools, & creation/distribution of climate change-themed kits. The second project component will include providing information on water customers bills and effects on water supplies; flyers/brochures that can be placed at public locations; online materials that can be uploaded to the websites of entities in the Region; booths at local fairs/events; and presentations at events. Both components will closely tie to water & energy conservation.	Community Stewardship	63
Merced Region Water Use Efficiency Program	Merced Integrated Regional Water Management Authority (MIRWMA)	Conservation/ Protection/ Restoration	Design	The Merced Region Water Use Efficiency Program will be implemented by multiple water purveyors in the Region to increase the level of water conservation & ensure long-term water use efficiency by the regions urban and ag users. The plan promotes water management strategies that support the states goal of a 20% reduction in urban per-capita water use by 2020, and will do so in a way that is beneficial to DACs in the region. The Program consists of four components: (1)interior water efficiency fixture retrofits, primarily targeted at DACs; (2)exterior single family water use surveys & upgrades; (3)exterior water use surveys & upgrades for large landscapes, including CII & residential agriculture landscapes; & (4)the preparation of water use budgets for accounts with dedicated landscape meters. The retrofits for households located in DACs are subsidized because DACs are often unable to afford the upfront capital to participate in rebate-based conservation programs.	Water Supply	69
Merquin County Water District Recharge Basin	Merquin County Water District	Construction	Planning	The Merquin County Water District (MCWD) recharge basin would be constructed in the northeastern portion of the district to enhance the groundwater levels in the area. The MCWD relies on its existing irrigation wells during short water years and during the off season when surface flows are not available to met demand from the customers of the District. The basin is proposed for an area that is at the intersection of 1st Street and Van Cliff Road. There are open parcels at this location and the parcels can receive water from the Pump Ditch that is connected to the Eastside Canal. The parcels in this location are presently receiving irrigation water and have soil types of Delhi loamy sand (DdA) and Hilmar loamy sand (HhA), both soils have good infiltration rates. Prior to construction of the basin in this area the District will get permission for access to a parcel and conduct preliminary infiltration tests to determine if the parcel is suitable for a long term water application with a benefit of recharge to the area. Successful testing of a parcel will then move to be purchased by the District and then the construction of the recharge basin. The parcels in the area are mostly 20 acre parcels, basin size approximately 18 acres in surface area. The basin would be filled when surface water is available in wet years or during storm flows in the winter from the drainage flow in the Eastside Canal. Monitoring wells would be installed to monitor the groundwater levels.	Water Supply	65
MID to Lone Tree Mutual Water Company	Lone Tree Mutual Water Company	Construction	Planning	Build an earthen canal from MID's Benedict Lateral south to LTMWC's facilities. The project would consist of a conveyance facility starting near the intersection of Gurr Road and Sandy Mush Road head south approximately 2-miles and connecting to LTMWC facilities. The area of Red Top, where LTMWC is located, has significant land subsidence. This project would alleviate the need to run deep wells beneath the Corcoran Clay layer in some years.	Water Supply	55.5
Owens Reservoir Enlargement and downstream leveel and channel improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Owens Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Owens Reservoir and downstream levee and channel improvements would increase the level of flood protection to Planada and Le Grand, both DAC's. Owens Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	55.75

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Planada Northwest 2019 Water System Improvement Project	Planada Community Services District	Construction	Design	The proposed project focuses on upgrades to the Planada Community Service District's (District) water distribution system to ensure consistent water delivery to residents of the community. Improvements include: replacement of undersized water lines in the northwestern part of town, with current thin-wall plastic 2", 3" and 4" diameter water lines upsized to 8" diameter Class 900 PVC pipe; upgrading old-style water meters to radio-read meters that have better leak-detection capabilities and can better track water usage and water wasting in the community; replacement of water main valves that are beyond their useful life and no longer operate or do not open and close all the way.	Water Supply	69.5
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Plan Development	Conceptual	This project consists of modeling Bear, Black Rascal, and Burns Creeks. These three creeks (or the confluence of them) run through the City of Merced and have historically caused flooding to the area. The real time simulation model (RTS) would utilize HEC-RAS and HEC-HMS modeling software. The ability to run real time simulations will improve the ability to forecast flood flows and flood events. This forecasting will be critical in utilizing flood flows for FLOOD-MAR projects in the area. Additionally, it will enable MID to be better prepared for flood flows which happen during the irrigation season. Excess surface water is often conservatively spilled in anticipation of a rain event that occurs during the irrigation season due to lack of forecasting information.	Flood Management	74.75
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Construction	Planning	This Project entails construction of at least 3 groundwater monitoring wells to evaluate the efficacy of MID's rice field recharge pilot project.	Water Supply	64.5
Snelling Channel and Floodplain Restoration	Merced Irrigation District	Conservation/ Protection/ Restoration	Planning	Develop plans to remove dredger tailings down to the natural floodplain surface at a 600+ acre site near Snelling. Includes design, permitting, implementation to restore in-river spawning and rearing habitats for anadromous salmonids along the Merced River. Approximately 2 miles of river channel would be targeted for restoration activities, which would focus on the incised channels and armored spawning beds. Restoration objectives would be to construct pool and riffle sequences to promote improved spawning conditions and sediment transport conditions. Adjacent tailings would be excavated to appropriate floodplain depths to inundate under current flow regimes. Sort excavated material; spawning-sized gravels would be added to armored spawning beds, and fine materials added to the developed floodplain for riparian recruitment. Work with local diverters to construct channel features to reduce annual channel maintenance and upgrade diversion facilties to benefit fish and habitat.	Environment	43
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Feasibility Study	Conceptual	Merced Irrigation District (MID), LeGrand-Athelone Water District (LGAWD) and Chowchilla Water District (CWD) desire to investigate the feasibility of improving and constructing water conveyance facilities to allow the transferring of irrigation water from MID to LGAWD and CWD. This analysis would review hydrologic data to assess how much water is available from MID for transfer to LGAWD and CWD, when it is available, and how this water availability matches with the demands from LGAWD and the Merced County portion of CWDs service area. A preliminary topographic survey would be performed to gather data on portions of two of the proposed alignments south of the Planada Canal and one south of the Fancher Lateral. A hydraulic analysis of the conveyance system utilizing HEC-RAS computer software would be utilized to bring alternative amounts of water to the districts. A cost analysis for the various options would be prepared.	Water Supply	86.75
University of California Merced Surface Water Augmentation	Merced Irrigation District and the University of California Merced	Construction	Planning	A sustainable water system balances economic, social and environmental needs to establish a balanced framework for sharing water. The University of California Merced is in the process of developing sustainable water strategies that include the optimization of water resources. Currently, the only source of UCM Campus water is the city well (aquifer), which provides 100% of water used by the campus. Irrigation accounts for 50% percent of the total potable water used by UCM. The Merced Irrigation District and the University of California Merced are partnering to support the interconnection of the University's irrigation water supply to the Fairfield Canal. Lake Yosemite which the Fairfield Canal originates from will charge the University's Little Lake through a delivery gate located adjacent to Scholars Lane Bridge. This non-potable water source will be used in lieu of ground water for irrigation, leaving groundwater in the basin for potable uses while optimizing the use of surface water.	Water Supply	59.25
Water Education and Public Information	City of Merced	Education	Ongoing Program	A project to fund City of Merced staffs' training courses for water and wastewater professionals. Also to assist with the public information campaigns for water use efficiency, storm drain pollution and Fats, Oils, and Grease. The project would send staff to various courses to increase their knowledge of the water and wastewater industry including and emphasizing water efficiency, storm drain pollution and FOG. Staff would demonstrate their knowledge via improved water management and attainment of higher state and water industry certifications. Water efficiency, storm drain pollution, and FOG campaigns are on-going and costly. Staff regularly attends public events and distributes campaign materials and efficiency devices, this project would help to off-set some of those costly devices to keep up public awareness and promote changes.	Community Stewardship	60.75

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Water Efficiencies Rebate Program	City of Merced	Conservation/ Protection/ Restoration	Conceptual	This proposal's goals are to save water and energy by awarding rebates to customers for upgrading to water efficient appliances. Water efficient new appliances will be rebated as follows: $100 per dish washer, $100 per clothes washer, $50 for converting toilets to ultra-low flow models of 1.6 gpf or less and new pool covers will also be rebated at $50 or 50% of the purchase price, whichever is less. Water conservation is needed to meet state mandates for 20% reduction by 2020. Many older homes have large water consuming appliances and this benefit will help our community to upgrade. By upgrading old appliances to water conserving devices, the customer can reduce water consumption and save energy without changing habits. This project will aid water users in the disadvantaged community of the City of Merced.	Water Supply	63.25
Water Meter Conservation Project	City of Atwater	Construction	Design	Install water meters at connections that feed the biggest lots in the City of Atwater. Currently the City of Atwater has 1/3 of their connections on water meters. Most of these our homes built after 1992 and have smaller lot sizes. The homes with bigger lot sizes are currently not charged based on their water consumption, just on a flat rate. The City would like to install meters on these lots to assist with better billing and better water conservation. It would also help the City with their annual report for water loss.	Water Supply	49.25
Weather Based Irrigation Controllers	City of Merced	Conservation/ Protection/ Restoration	Ongoing Program	This project is for the purchase and installation of Toro Sentinel Controllers for parks irrigation systems in the City of Merced. The Toro Sentinel Controllers are weather based irrigation controllers. The City began to use the Toro Sentinel Controllers in 2011 and currently has 68 units in the parks and maintenance districts. This powerful, yet simple-to-use controller software is ideal for large sites such as cities as it allows a user to control up to 999 field satellites from a remote location with a desktop or laptop computer. The City has a need for approximately 100 more units. The controllers can remotely shut off water, change irrigation times, days, and set alarms for stations if malfunctions occur such as power outages or extreme flows. Having the Toro Sentinel Controllers reduces manual labor and travel time from controller to controller and most importantly aids in water efficiency as the controller automatically adjusts for changes in weather.	Community Stewardship	68.75
Well 20 TCP Treatment	City of Atwater	Construction	Conceptual	Redesign and install treatment for 1,2,3-TCP at Well 20. Currently Well 20 has been drilled but nothing else has been done since there was found to be high levels of 1,2,3-TCP during pump testing. Well 20 used to be the second highest producing well in the city until high levels of manganese and iron were found due to the well being drilled too deep. A new hole was drilled on the same lot but needs additional money to cover cost of installing water treatment. City suffers from poor water pressure during summer at peak usage hours due to well not being online.	Water Supply	53.75

Merced IRWMP Update 2018
Project Score Details

Project Information			Scoring Criteria:	Individual Criterion Scores													Total Weighted Score
Project Name	Project Proponent	Primary Benefit	Criteria Weights:	Addresses IRWM Plan Objectives 15%	Employs Multiple Resource Management Strategies 10%	Is Ready to be Implemented 7%	Is Technically Feasible 8%	Is Economically Feasible 8%	Has a Local Funding Match 7%	Benefits DACs 9%	Directly Addresses a Critical Water Supply or Water Quality Need of a DAC 10%	Addresses an EJ Issue or Benefits Disadvantaged Underrepresented Communities (DUCs) 4%	Provides benefits to Native American Tribal Communities 0%	Contributes to Climate Change Adaptation or Mitigation 11%	Supported by Multiple Local Project Sponsors 11%	-
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Water Supply		100	100	25	100	25	50	100	100	100	0	0	25	66
Ballico Community Water Service District 2nd Well Proposal funding	Ballico Community Water Service District	Water Supply		100	25	0	100	100	50	100	100	100	0	50	25	68.25
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Flood Management		100	50	25	0	25	50	100	100	100	0	0	50	55.75
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Water Supply		100	100	0	100	25	100	100	100	100	0	50	25	73.25
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		100	100	50	100	25	100	100	100	100	0	100	50	85
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		100	50	25	0	25	50	100	100	100	0	0	50	55.75
Cash for Grass Pilot Program to Eliminate Wasteful Pollution Containing Water Run-off	City of Merced	Environment		100	75	50	100	100	100	50	100	0	0	50	25	71.75
City of Merced Stom Drain Master Plan Update	City of Merced, MID	Flood Management		100	100	100	100	100	100	50	100	0	0	100	50	86
Crocker Dam Modification	Merced Irrigation District	Water Supply		100	100	0	100	25	50	100	100	100	0	0	25	64.25
Design and Construction of Fish Screens at Merced River Diversions	California Department of Fish and Wildlife	Environment		100	25	0	100	100	50	50	0	100	0	0	25	48.25
Drought Tolerant Landscape Conversion	City of Merced	Community Stewardship		100	25	25	100	50	100	50	100	0	0	0	25	55.5
El Nido Recharge Basin	Merced Irrigation District	Water Supply		100	100	0	100	50	50	100	100	100	0	0	50	69
Exchange Recycled Water for Surface Water in Parks	City of Merced	Environment		100	25	0	100	100	0	50	100	0	0	0	50	53.5
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Water Supply		100	100	0	100	25	50	100	100	100	0	0	25	64.25
Lake Yosemite Booster Pump Station	Merced Irrigation District	Water Supply		100	100	0	100	100	50	100	100	100	0	0	25	70.25
Le Grand-Athlone WD Surface Water Extension	Le Grand-Athlone Water District	Water Supply		100	75	0	100	25	50	100	100	100	0	0	25	61.75
Livingston Canal Lining Project	Merced Irrigation District	Flood Management		100	100	100	100	25	0	50	0	0	0	0	50	52
Lower Merced River Stewardship Program Round 2	East Merced Resource Conservation Districts	Community Stewardship		100	100	25	100	100	50	75	0	100	0	0	100	68
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Water Supply		100	100	0	0	25	100	100	0	100	0	0	25	49.75
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Water Supply		100	100	100	100	100	100	100	100	100	0	0	25	80.75
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		100	50	25	0	25	50	100	100	100	0	0	50	55.75
McCoy Lateral Regulating Basin	Merced Irrigation District	Water Supply		100	100	0	100	25	100	100	0	100	0	0	50	60.5
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Environment		0	50	100	100	0	0	25	0	0	0	0	75	30.5
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Water Supply		100	100	100	100	100	0	100	100	0	0	0	25	69.75
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Water Supply		100	25	0	100	25	0	100	0	0	0	0	25	39.25
Merced IRWM Region Climate Change Modeling	Merced Integrated Regional Water Management Authority (MIRWMA)	Water Supply		100	25	100	100	100	50	25	0	100	0	0	25	53
Merced IRWM Regional GHG Emissions Inventory	Merced Integrated Regional Water Management Authority (MIRWMA)	Environment		60	75	100	100	100	0	25	0	0	0	0	25	44.5
Merced Region Climate Change Outreach and Education	Merced Integrated Regional Water Management Authority (MIRWMA)	Community Stewardship		100	50	75	100	100	0	100	100	0	0	0	25	63
Merced Region Water Use Efficiency Program	Merced Integrated Regional Water Management Authority (MIRWMA)	Water Supply		100	75	75	100	50	50	100	100	100	0	0	25	69
Merquin County Water District Recharge Basin	Merquin County Water District	Water Supply		100	25	25	100	50	100	50	100	100	0	50	25	65
MID to Lone Tree Mutual Water Company	Lone Tree Mutual Water Company	Water Supply		40	50	25	100	0	50	100	100	100	0	50	25	55.5
Owens Reservoir Enlargement and downstream leveel and channel improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		100	50	25	0	25	50	100	100	100	0	0	50	55.75
Planada Northwest 2019 Water System Improvement Project	Planada Community Services District	Water Supply		100	100	75	100	25	50	100	100	100	0	0	25	69.5

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced IRWMP Update 2018
Project Score Details

Project Information			Scoring Criteria:	Individual Criterion Scores												Total Weighted Score
Project Name	**Project Proponent**	**Primary Benefit**	**Criteria Weights:**	**Addresses IRWM Plan Objectives** 15%	**Employs Multiple Resource Management Strategies** 10%	**Is Ready to be Implemented** 7%	**Is Technically Feasible** 8%	**Is Economically Feasible** 8%	**Has a Local Funding Match** 7%	**Benefits DACs** 9%	**Directly Addresses a Critical Water Supply or Water Quality Need of a DAC** 10%	**Addresses an EJ Issue or Benefits Disadvantaged Underrepresented Communities (DUCs)** 4%	**Provides benefits to Native American Tribal Communities** 0%	**Contributes to Climate Change Adaptation or Mitigation** 11%	**Supported by Multiple Local Project Sponsors** 11%	-
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Flood Management		100	75	100	100	100	50	100	100	100	0	0	25	74.75
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Water Supply		100	25	25	100	100	50	100	100	100	0	0	25	64.5
Snelling Channel and Floodplain Restoration	Merced Irrigation District	Environment		100	75	25	0	50	50	50	0	100	0	0	25	43
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Water Supply		100	50	100	100	100	100	100	100	100	0	50	75	86.75
University of California Merced Surface Water Augmentation	Merced Irrigation District and the University of California Merced	Water Supply		100	50	25	100	50	100	100	0	100	0	0	50	59.25
Water Education and Public Information	City of Merced	Community Stewardship		100	25	100	100	50	100	50	100	0	0	0	25	60.75
Water Efficiencies Rebate Program	City of Merced	Water Supply		100	25	0	100	100	100	50	100	0	0	50	25	63.25
Water Meter Conservation Project	City of Atwater	Water Supply		60	25	50	100	25	100	50	100	0	0	0	25	49.25
Weather Based Irrigation Controllers	City of Merced	Community Stewardship		100	50	100	100	50	100	50	100	0	0	50	25	68.75
Well 20 TCP Treatment	City of Atwater	Water Supply		80	75	0	100	25	100	50	100	0	0	0	25	53.75

Merced IRWMP Update 2018
Project Scores and Rankings

Project Name	Project Proponent	Project Type	Project Status	Score	Tier[1]	Estimated Cost	Primary Benefit
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Feasibility Study	Conceptual	86.75	1	$ 100,000	Water Supply
City of Merced Stom Drain Master Plan Update	City of Merced, MID	Plan Development	Planning	86	1	$ 300,000	Flood Management
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Design	85	1	$ 35,761,703	Flood Management
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Feasibility Study	Conceptual	80.75	1	$ 240,000	Water Supply
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Plan Development	Conceptual	74.75	1	$ 100,000	Flood Management
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Construction	Conceptual	73.25	1	$ 1,000,000	Water Supply
Cash for Grass Pilot Program to Eliminate Wasteful Pollution Containing Water Run-off	City of Merced	Conservation/ Protection/	Design	71.75	1	$ 65,680	Environment
Lake Yosemite Booster Pump Station	Merced Irrigation District	Construction	Conceptual	70.25	1	$ 100,000	Water Supply
Merquin County Water District Recharge Basin	Merquin County Water District	Construction	Planning	65	1	$ 1,400,000	Water Supply
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Construction	Planning	64.5	1	$ 250,000	Water Supply
El Nido Recharge Basin	Merced Irrigation District	Construction	Conceptual	69	1	$ 500,000	Water Supply
Ballico Community Water Service District 2nd Well Proposal funding	Ballico Community Water Service District	Construction	Conceptual	68.25	1	$ 250,000	Water Supply
Lower Merced River Stewardship Program Round 2	East Merced Resource Conservation Districts	Education	Planning	68	1	$ 199,000	Community Stewardship
Merced Region Water Use Efficiency Program	Merced Integrated Regional Water Management Authority (MIRWMA)	Conservation/ Protection/	Design	69	1	$ 500,000	Water Supply
Weather Based Irrigation Controllers	City of Merced	Conservation/ Protection/	Ongoing Program	68.75	1	$ 540,000	Community Stewardship
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Construction	Planning	66	1	$ 3,300,000	Water Supply
Merced Region Climate Change Outreach and Education	Merced Integrated Regional Water Management Authority (MIRWMA)	Education	Design	63	2	$ 100,000	Community Stewardship
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Plan Development	Conceptual	69.75	1	$ 150,000	Water Supply
Planada Northwest 2019 Water System Improvement Project	Planada Community Services District	Construction	Design	69.5	1	$ 2,184,198	Water Supply
Crocker Dam Modification	Merced Irrigation District	Construction	Conceptual	64.25	1	$ 1,240,000	Water Supply
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Construction	Conceptual	64.25	1	$ 3,000,000	Water Supply
Water Education and Public Information	City of Merced	Education	Ongoing Program	60.75	2	$ 175,000	Community Stewardship
Water Efficiencies Rebate Program	City of Merced	Conservation/ Protection/	Conceptual	63.25	1	$ 100,000	Water Supply
Le Grand-Athlone WD Surface Water Extension	Le Grand-Athlone Water District	Construction	Conceptual	61.75	2	$ 20,000,000	Water Supply
McCoy Lateral Regulating Basin	Merced Irrigation District	Construction	Conceptual	60.5	2	$ 3,282,600	Water Supply
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Data Management	Conceptual	30.5	2	-	Environment
University of California Merced Surface Water Augmentation	Merced Irrigation District and the University of California Merced	Construction	Planning	59.25	2	$ 800,000	Water Supply

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced IRWMP Update 2018
Project Scores and Rankings

Project Name	Project Proponent	Project Type	Project Status	Score	Tier[1]	Estimated Cost	Primary Benefit
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Construction	Planning	55.75	2	$ 20,000,000	Flood Management
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	55.75	2	$ 15,000,000	Flood Management
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	55.75	2	$ 15,000,000	Flood Management
Owens Reservoir Enlargement and downstream leveel and channel improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	55.75	2	$ 15,000,000	Flood Management
Drought Tolerant Landscape Conversion	City of Merced	Construction	Planning	55.5	2	$ 500,000	Community Stewardship
Exchange Recycled Water for Surface Water in Parks	City of Merced	Demonstration Project	Conceptual	53.5	2	$ 80,000	Environment
Merced IRWM Region Climate Change Modeling	Merced Integrated Regional Water Management Authority (MIRWMA)	Feasibility Study	Conceptual	53	2	$ 250,000	Water Supply
MID to Lone Tree Mutual Water Company	Lone Tree Mutual Water Company	Construction	Planning	55.5	2	$ 10,000,000	Water Supply
Livingston Canal Lining Project	Merced Irrigation District	Construction	Construction	52	2	$ 3,100,000	Flood Management
Well 20 TCP Treatment	City of Atwater	Construction	Conceptual	53.75	2	$ 3,000,000	Water Supply
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Construction	Conceptual	49.75	2	$ 1,600,000	Water Supply
Water Meter Conservation Project	City of Atwater	Construction	Design	49.25	2	$ 800,000	Water Supply
Design and Construction of Fish Screens at Merced River Diversions	California Department of Fish and Wildlife	Conservation/ Protection/	Conceptual	48.25	2	$ 184,000	Environment
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Construction	Conceptual	39.25	2	$ 6,500,000	Water Supply
Merced IRWM Regional GHG Emissions Inventory	Merced Integrated Regional Water Management Authority (MIRWMA)	Other	Conceptual	44.5	2	$ 150,000	Environment
Snelling Channel and Floodplain Restoration	Merced Irrigation District	Conservation/ Protection/	Planning	43	2	$ 1,020,000	Environment

1. Tier 1 includes projects that scored in the top 50th percentile, Tier 2 included projects that scored in the bottom 50th percentile.

Merced IRWMP Update 2018
Project Scoring Guide for IRWMP Project List

Component	Criterion	Scoring Procedure	Raw Score Assigned	Final 2018 Weights	
				% of Score	Subtotal
1. Principles of IRWM Planning	Addresses IRWM Plan Objectives	Score based on # of objectives addressed with highest priority objectives counting as two objectives	6+ objectives = 100 pts 5 objectives = 80 pts 4 objectives = 60 pts 3 objectives = 40 pts 2 objectives = 20 pts	15	25
	Employs Multiple Resource Management Strategies	Score based on # of strategies employed	8+ strategies = 100 pts 6-7 strategies = 75 pts 4-5 strategies = 50 pts 2-3 strategies = 25 pts	10	
2. Project Status and Feasibility	Is Ready to be Implemented	Score based on degree of work needed prior to implementation	Ready to construct / implement (or is a paper study) = 100 pts Preliminary Design Completed = 75 pts Planning Completed = 50 pts Planning in Progress = 25 pts No Work Completed = 0 pts	7	30
	Is Technically Feasible	Score based on technical feasibility documentation	Feasibility documentation is available, or explanation of feasibility is provided = 100 pts No feasibility information is provided = 0 pts	8	
	Is Economically Feasible	Score based on estimated benefit:cost ratio	B:C Ratio = 4 = 100 pts B:C Ratio ≥ 3 and < 4 = 75 pts B:C Ratio ≥ 2 and < 3 = 50 pts B:C Ratio ≥ 1 and < 2 = 25 pts B:C Ratio < 1 = 0 pts	8	
	Has a Local Funding Match	Score based on status of local funding match	Local funding match secured = 100 pts Local funding match not secured and project is in an unincorporated area = 50 pts Local funding match not secured = 0 pts	7	
3. Other Regional Priorities	Benefits Disadvantaged Communities	Score based on providing targeted benefits to more significantly disadvantaged communities within the region, considering household income and percentage of households below the poverty level	Project directly benefits El Nido, Planada or Franklin/Beachwood = 100 pts Project directly benefits Le Grand or Winton = 75 pts Project directly benefits Atwater, Snelling, Livingston, Stevinson, or DAC areas of City of Merced = 50 pts Project directly benefits regional community, but benefits not targeted to a specific DAC = 25 pts Does not provide a benefit to a disadvantaged community = 0 pts	9	45
	Directly Addresses a Critical Water Supply or Water Quality Need of a Disadvantaged Community	Score is based on Yes/No response	Yes = 100 pts No = 0 pts	10	
	Addresses an existing environmental justice (EJ) issue or provides benefits to disadvantaged underrepresented communities (DUCs), including unincorporated areas.	Score is based on Yes/No response	Yes = 100 pts No = 0 pts	4	
	Provides benefits to Native American Tribal Communities	Score is based on Yes/No response	Yes = 100 pts No = 0 pts	0	
	Contributes to Climate Change Adaptation or Mitigation	Score is based on number of adaptation and mitigation questions addressed	Yes to 3+ questions = 100 pts Yes to 1-2 questions = 50 pts Yes to 0 questions = 0 pts	11	
	Supported by Multiple Local Project Sponsors	Score is based on # of local project sponsors working together to implement the project	4+local project sponsors = 100 pts 3 local project sponsors = 75 pts 2 local project sponsors = 50 pts 1 local project sponsor = 25 pts	11	
Total					**100**

Rubric used for projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced IRWMP Update 2018
Simulated Benefit-Cost Score Summary

			Information provided by project proponents in Opti					Conversions to 2018 dollars					Cost Score		Benefit Score		Overall B-C Score	
Project Name	Project Proponent	Project Status	Estimated Project Cost	Annual O&M	Base Year for Costs	Estimated Project Life	Has a project economic analysis and/or benefit cost ratio been developed for the project?	Capital Cost, original year $ (Total cost minus O&M, if provided)	Capital Cost, 2018 $[1]	Annual O&M Cost, original year $[2]	Annual O&M Cost, 2018 $[1]	Project Life for PV Calculations[3]	Present Value Cost[4]	Cost Score[5]	Number of Objectives Met	Benefit Score[6]	B:C Ratio[7]	Final Simulated B:C Ratio Score[8]
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Planning	$ 3,300,000.00	-	2017	30	No	$ 3,300,000	$ 3,361,485	$ 330,000	$ 336,149	30	$ 7,988,513	4	13	4	1.0	25
Ballico Community Water Service District 2nd Well Proposal funding	Ballico Community Water Service District	Conceptual	$ 250,000.00	-	2013	-	No	$ 250,000	$ 286,280	$ 25,000	$ 28,628	20	$ 614,640	1	10	4	4.0	100
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Planning	$ 20,000,000.00	-	2012	100 years	No	$ 20,000,000	$ 23,269,928	$ 2,000,000	$ 2,326,993	100	$ 61,938,838	4	13	4	1.0	25
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Conceptual	$ 1,000,000.00	-	2018	-	No	$ 1,000,000	$ 1,000,000	$ 100,000	$ 100,000	20	$ 2,146,992	3	15	4	1.3	25
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Design	$ 35,761,703.00	-	2017	60 years	Yes	$ 35,761,703	$ 36,428,009	$ 3,576,170	$ 3,642,801	60	$ 95,300,873	4	13	4	1.0	25
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Planning	$ 15,000,000.00	-	2012	100 years	No	$ 15,000,000	$ 17,452,446	$ 1,500,000	$ 1,745,245	100	$ 46,454,129	4	13	4	1.0	25
Cash for Grass Pilot Program to Eliminate Wasteful Pollution Containing Water Run-off	City of Merced	Design	$ 65,680.00	-	2012	-	No	$ 65,680	$ 76,418	$ 6,568	$ 7,642	20	$ 164,070	1	11	4	4.0	100
City of Merced Stom Drain Master Plan Update	City of Merced, MID	Planning	$ 300,000.00	-	2019	-	-	$ 300,000	$ 300,000	$ 30,000	$ 30,000	20	$ 644,098	1	11	4	4.0	100
Crocker Dam Modification	Merced Irrigation District	Conceptual	$ 1,240,000.00	-	2018	-	-	$ 1,240,000	$ 1,240,000	$ 124,000	$ 124,000	20	$ 2,662,270	3	13	4	1.3	25
Design and Construction of Fish Screens at Merced River Diversions	California Department of Fish and Wildlife	Conceptual	$ 184,000.00	-	2013	3 years (one per screen)	-	$ 184,000	$ 210,702	$ 18,400	$ 21,070	3	$ 267,023	1	9	4	4.0	100
Drought Tolerant Landscape Conversion	City of Merced	Planning	$ 500,000.00	-	2011	25	No	$ 500,000	$ 591,531	$ 50,000	$ 59,153	25	$ 1,347,707	2	6	4	2.0	50
El Nido Recharge Basin	Merced Irrigation District	Conceptual	$ 500,000.00	-	2012	-	No	$ 500,000	$ 581,748	$ 50,000	$ 58,175	20	$ 1,249,009	2	13	4	2.0	50
Exchange Recycled Water for Surface Water in Parks	City of Merced	Conceptual	$ 80,000.00	-	2012	-	No	$ 80,000	$ 93,080	$ 8,000	$ 9,308	20	$ 199,841	1	7	4	4.0	100
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Conceptual	$ 3,000,000.00	-	2017	-	-	$ 3,000,000	$ 3,055,896	$ 300,000	$ 305,590	20	$ 6,560,984	4	13	4	1.0	25
Lake Yosemite Booster Pump Station	Merced Irrigation District	Conceptual	$ 100,000.00	-	2017	-	-	$ 100,000	$ 101,863	$ 10,000	$ 10,186	20	$ 218,699	1	13	4	4.0	100
Le Grand-Athlone WD Surface Water Extension	Le Grand-Athlone Water District	Conceptual	$ 20,000,000.00	-	2017	-	No	$ 20,000,000	$ 20,372,637	$ 2,000,000	$ 2,037,264	20	$ 43,739,891	4	7	4	1.0	25
Livingston Canal Lining Project	Merced Irrigation District	Construction	$ 3,100,000.00	-	2012	-	-	$ 3,100,000	$ 3,606,839	$ 310,000	$ 360,684	20	$ 7,743,855	4	11	4	1.0	25
Lower Merced River Stewardship Program Round 2	East Merced Resource Conservation Districts	Planning	$ 199,000.00	$2,000.00	2018	-	No	$ 197,000	$ 197,000	$2,000.00	$2,000.00	20	$ 219,940	1	11	4	4.0	100
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Conceptual	$ 1,600,000.00	-	2012	-	-	$ 1,600,000	$ 1,861,594	$ 160,000	$ 186,159	20	$ 3,996,828	3	13	4	1.3	25
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Conceptual	$ 240,000.00	-	2012	-	-	$ 240,000	$ 279,239	$ 24,000	$ 27,924	20	$ 599,524	1	13	4	4.0	100
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Planning	$ 15,000,000.00	-	2012	100 years	No	$ 15,000,000	$ 17,452,446	$ 1,500,000	$ 1,745,245	100	$ 46,454,129	4	13	4	1.0	25
McCoy Lateral Regulating Basin	Merced Irrigation District	Conceptual	$ 3,282,600.00	-	2014	50 years	-	$ 3,282,600	$ 3,624,229	$ 328,260	$ 362,423	50	$ 9,336,689	4	13	4	1.0	25
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Conceptual	-	-	2017	-	No	-	-	-	-	-	-	-	1	1	-	0
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Conceptual	$ 150,000.00	-	2018	-	-	$ 150,000	$ 150,000	$ 15,000	$ 15,000	20	$ 322,049	1	13	4	4.0	100
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Conceptual	$ 6,500,000.00	-	2017	-	-	$ 6,500,000	$ 6,621,107	$ 650,000	$ 662,111	20	$ 14,215,465	4	13	4	1.0	25
Merced IRWM Region Climate Change Modeling	Merced Integrated Regional Water Management Authority (MIRWMA)	Conceptual	$ 250,000.00	-	2012	3 to 5 years	No	$ 250,000	$ 290,874	$ 25,000	$ 29,087	5	$ 413,401	1	8	4	4.0	100
Merced IRWM Regional GHG Emissions Inventory	Merced Integrated Regional Water Management Authority (MIRWMA)	Conceptual	$ 150,000.00	-	2012	3-5 years	No	$ 150,000	$ 174,524	$ 15,000	$ 17,452	5	$ 248,041	1	4	4	4.0	100

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced IRWMP Update 2018
Simulated Benefit-Cost Score Summary

			Information provided by project proponents in Opti					Conversions to 2018 dollars					Cost Score		Benefit Score		Overall B-C Score	
Project Name	Project Proponent	Project Status	Estimated Project Cost	Annual O&M	Base Year for Costs	Estimated Project Life	Has a project economic analysis and/or benefit cost ratio been developed for the project?	Capital Cost, original year $ (Total cost minus O&M, if provided)	Capital Cost, 2018 $[1]	Annual O&M Cost, original year $[2]	Annual O&M Cost, 2018 $[1]	Project Life for PV Calculations[3]	Present Value Cost[4]	Cost Score[5]	Number of Objectives Met	Benefit Score[6]	B:C Ratio[7]	Final Simulated B:C Ratio Score[8]
Merced Region Climate Change Outreach and Education	Merced Integrated Regional Water Management Authority (MIRWMA)	Design	$ 100,000.00	-	2012	-	No	$ 100,000	$ 116,350	$ 10,000	$ 11,635	20	$ 249,802	1	13	4	4.0	100
Merced Region Water Use Efficiency Program	Merced Integrated Regional Water Management Authority (MIRWMA)	Design	$ 500,000.00	-	2012	-	No	$ 500,000	$ 581,748	$ 50,000	$ 58,175	20	$ 1,249,009	2	12	4	2.0	50
Merquin County Water District Recharge Basin	Merquin County Water District	Planning	$ 1,400,000.00	$6,000.00	2018	50	No	$ 1,394,000	$ 1,394,000	$6,000.00	$6,000.00	50	$ 1,488,571	2	6	4	2.0	50
MID to Lone Tree Mutual Water Company	Lone Tree Mutual Water Company	Planning	$ 10,000,000.00	-	2017	-	-	$ 10,000,000	$ 10,186,318	$ 1,000,000	$ 1,018,632	20	$ 21,869,945	4	3	3	0.8	0
Owens Reservoir Enlargement and downstream leveel and channel improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Planning	$ 15,000,000.00	-	2012	-	No	$ 15,000,000	$ 17,452,446	$ 1,500,000	$ 1,745,245	20	$ 37,470,264	4	13	4	1.0	25
Planada Northwest 2019 Water System Improvement Project	Planada Community Services District	Design	$ 2,184,198.00	-	2018	-	No	$ 2,184,198	$ 2,184,198	$ 218,420	$ 218,420	20	$ 4,689,456	3	12	4	1.3	25
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Conceptual	$ 100,000.00	-	2018	-	-	$ 100,000	$ 100,000	$ 10,000	$ 10,000	20	$ 214,699	1	13	4	4.0	100
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Planning	$ 250,000.00	-	2017	-	-	$ 250,000	$ 254,658	$ 25,000	$ 25,466	20	$ 546,749	1	13	4	4.0	100
Snelling Channel and Floodplain Restoration	Merced Irrigation District	Planning	$ 1,020,000.00	-	2012	5 years	No	$ 1,020,000	$ 1,186,766	$ 102,000	$ 118,677	5	$ 1,686,675	2	12	4	2.0	50
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Conceptual	$ 100,000.00	-	2018	100 years	No	$ 100,000	$ 100,000	$ 10,000	$ 10,000	100	$ 266,175	1	14	4	4.0	100
University of California Merced Surface Water Augmentation	Merced Irrigation District and the University of California Merced	Planning	$ 800,000.00	-	2014	20 years	-	$ 800,000	$ 883,258	$ 80,000	$ 88,326	20	$ 1,896,349	2	13	4	2.0	50
Water Education and Public Information	City of Merced	Ongoing Progr	$ 175,000.00	$70,000.00	2012	-	No	$ 105,000	$ 122,167	$70,000.00	$ 81,445	20	$ 1,056,332	2	7	4	2.0	50
Water Efficiencies Rebate Program	City of Merced	Conceptual	$ 100,000.00	-	2018	24 months	No	$ 100,000	$ 100,000	$ 10,000	$ 10,000	2	$ 118,334	1	8	4	4.0	100
Water Meter Conservation Project	City of Atwater	Design	$ 800,000.00	-	2018	40	-	$ 800,000	$ 800,000	$ 80,000	$ 80,000	40	$ 2,003,704	3	4	4	1.3	25
Weather Based Irrigation Controllers	City of Merced	Ongoing Progr	$ 540,000.00	-	2011	25 years	No	$ 540,000	$ 638,854	$ 54,000	$ 63,885	25	$ 1,455,524	2	9	4	2.0	50
Well 20 TCP Treatment	City of Atwater	Conceptual	$ 3,000,000.00	-	3000000	25 YEARS	No	$ 3,000,000	$ 3,000,000	$ 300,000	$ 300,000	25	$ 6,835,007	4	5	4	1.0	25

Footnotes:
1. Costs that were not originally provided in 2018 dollars were converted to 2018 dollars using the ENR CCI for San Francisco (annual averages used).
2. If no O&M costs were provided, 10% of total project cost was assumed.
3. If no project life was provided, 20 years was assumed.
4. Discount factor of 6% assumed (based on previous IRWM guidance).
5. PV Cost ≥ $5M = 4 pts; $2M < PV Cost < $5M = 3 pts; $1 M < PV Cost ≤ $2M = 2 pts; Present Value Cost ≤ $1M = 1 pt
6. 4 or more objectives met = 4 pts; 3 objectives = 3 pts; 2 objectives = 2 pts; 1 objective = 1 pt
7. Benefits score divided by cost score; generally, B:C > 1 preferred as the benefits outweigh the costs.
8. Simulated B:C Ratio < 1 = 0 pts; simulated B:C Ratio ≥ 1 and < 2 = 25 pts; simulated B:C Ratio ≥ 2 and < 3 = 50 pts; simulated B:C Ratio ≥ 3 and < 4 = 75 pts; simulated B:C Ratio = 4 = 100 pts

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced SWRP 2018
Project Summary

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Construction	Planning	The project entails construction of a regulating/recharge basin. The project will provide groundwater recharge in the area and also serve as a regulating reservoir to be used by MID operations personnel. Water supply benefits will be achieved via groundater recharge, as the groundwater basin supports both agricultural and urban water supply. The storage provided by this basin could also be used in a storm event to store excess water for controlled releases at a later date when it is safe to do so. During construciton, the basin will be excavated, and automated inlet and outlet gates will be constructed along with the necessary flow measurement and control. The overall footprint of the project site is estimated at 20 acres, and the basin will occupy approximately 15 acres. These numbers are approximate and will be solidified at a later date.	Water Supply	50.5
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Construction	Planning	Bear Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Bear Reservoir and downstream levee and channel improvements would increase the level of flood protection to the most populated areas of Merced County. Bear Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	30.5
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Construction	Conceptual	MID's Le Grand Canal is a critical flood control facility capable of conveying water from the Lake Yosemite watershed. The canal originates at Lake Yosemite and terminates around the town of Le Grand, however during flood season it is intercepted midway by a coffer dam along with a breach, created by MID, at its crossing with Black Rascal Creek that diverts all drainage to the creek. The Le Grand Canal contributes up to 600 CFS of floodwater to Black Rascal creek. Without an existing flood control reservoir on Black Rascal Creek, the Lake Yosemite flood flows pose significant flooding risks to the City of Merced, adjacent unincorporated areas, and several communities downstream of Merced. Additionally, breaching of the canal prevents flows from continuing downstream within the canal, depriving agricultural areas of precious storm water supply. This project proposes a set of gates in the canal to replace the breach which is installed annually, allowing MID to redirect and control flood flows. This proposed control structure can also be utilized to send flood flows on alternate, longer routes creating an artificial offset to the timing of peak storm flows as well as permit storm flows to be directed to alternate creeks and artificial groundwater recharge areas. The potential for groundwater recharge cannot be understated as the Le Grand Canal supplies a large area that has historically faced declining groundwater levels and limited recharge.	Water Supply	63.5
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Design	Construction of a regulating reservoir on Black Rascal Creek. Project location is immediately north of Yosemite Avenue and Arboleda Drive in northeast Merced. Project will provide protection against a 200-year storm event and will provide much needed flood control on the currently unprotected Black Rascal Creek Watershed. Project will be beneficial to the project area and also to all downstream areas. The reservoir will maintain a deadpool for wildlife purposes. During the flood season, the reservoir will act primarily as a flood control retarding basin. During the irrigation season, the reservoir will regulate irrigation flows thereby increasing Merced Irrigation District system water efficiency without impacting power generation scheduling at New Exchequer Dam with the Independant System Operator (ISO).	Flood Management	71
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Burns Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Burns Reservoir and downstream levee and channel improvements would increase the level of flood protection to the most populated areas of Merced County. Burns Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	30.5

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
City of Merced Storm Drain Master Plan Update	City of Merced, MID	Plan Development	Planning	The City of Merced is seeking to prepare a revised Storm Drain Master Plan based upon the City's updated General Plan (Merced Vision 2030). The City Storm Drain last master plan was developed in 2002. Since then, the City's drainage system has been expanded and upgraded. The revised Storm Drain Master Plan will identify capacity deficiencies in several major segments of the City's storm drain system particularly with those areas of the system that rely intricately upon the Merced Irrigation District (MID) canal system for stormwater conveyance. The City will also look at ways to utilize storm runoff capture for groundwater recharge and reuse as irrigation water. The purpose of updating the storm drain master plan is to incorporate all of the projects completed since the last master plan was prepared into an updated storm drain computer model and master plan document, and to identify and prioritize a new set of storm drain projects to further improve the storm drain system in the City. The prioritized set of storm drain improvement projects for future funding.	Flood Management	59.5
Crocker Dam Modification	Merced Irrigation District	Construction	Conceptual	This project encompasses installation of automatic gates at MID's Crocker Dam, located just west of Merced at the bifurcation of Black Rascal Creek and Bear Creek. Crocker Dam is a fixed structure with removable plates that are installed every spring (sometimes multiple times depending on late rains) to raise the water level to allow irrigation diversions. The current configuration severely limits the operational flexibility and control over this facility, as the gate is primarily either "up" or "down," and opening or lowering the gate is a difficult task. It is proposed to replace these plates with automatic gates. The automatic gates would allow for MID to remotely operate the dam and adaptively manage the flows in Bear Creek/Black Rascal Creek. This would provide improved flood control downstream, water storage, and be a supply for groundwater recharge from stormwater (FloodMARS).	Water Supply	48
El Nido Recharge Basin	Merced Irrigation District	Construction	Conceptual	This project entails construction of additional recharge basins in El Nido. Work will include purchase, design of the recharge basin, design of the water conveyance facilities, design of the monitoring network and data collection program, and development of operations guidelines. Based on the design, permits and approvals will be obtained prior to construction. Construction activities include construction of the basin, construction of the recharge facilities, drilling of monitoring wells, installation of flow meters and check structures, and surveying. After construction the basin will be monitored for two years to gage the success of the basin and modify the operations guidelines if necessary.	Water Supply	48
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Construction	Conceptual	This project will consist of flood flow capacity improvements and canal automation which is essential for implementing Flood-MAR projects and conveying water to MID's existing El Nido Groundwater Recharge Basin. Additionally, canal automation will improve flood control operations especially when spring storms overlap with the irrigation season. During flood season, canal automation can also be used to turn the canals into mini flood control reservoirs, filling each pool level and storing water for release when safe. This will essentially, create miles of flood control storage. These types of operations are currently not possible as the conveyance system is over a century old and requires frequent manual adjustment for flow fluctuations. The Fairfield and El Nido Canal system can convey water to over 52,000 acres. This project would open that acreage up to potential groundwater recharge and flood control projects. During the irrigation season, canal automation will also help to reduce spills conserve water.	Water Supply	48
Lake Yosemite Booster Pump Station	Merced Irrigation District	Construction	Conceptual	Lake Yosemite receives inflows from MID's Main Canal. It has four primary outlets; the Tower Lateral, the Sells Lateral, the Fairfield Canal, and the Le Grand Canal. During winter operations, the lake level is so low that only the Tower Lateral can be used for outflow (unless a major storm event occurs) due to the other 3 canal headgates having a higher invert. This project entails installation of booster pump station to allow for full utilization of Lake Yosemite's storage capacity and diversion facilities. The Booster pump would permit MID to move Lake Yosemite water to other portions of the district and be a key tool in implementing Flood-MAR projects.	Water Supply	48
Livingston Canal Lining Project	Merced Irrigation District	Construction	Construction	The project will line a portion of the canal section of the Livingston Canal through the City of Atwater. The Livingston Canal is both a stormwater facility and irrigation facility.	Flood Management	36
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Construction	Conceptual	This project entails retrofitting the head gates of the main canal for seismic purposes. The Main Canal serves approximately 150,000 acres in the MID place of use.	Water Supply	48.5
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Feasibility Study	Conceptual	Perform a study on a 10,000 AF offstream regulating reservoir.	Water Supply	61

Merced SWRP 2018
Project Summary

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Mariposa Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Mariposa Reservoir and downstream levee and channel improvements would increase the level of flood protection to Planada and Le Grand. Both are DAC's in Merced County. Mariposa Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	30.5
McCoy Lateral Regulating Basin	Merced Irrigation District	Construction	Conceptual	This project includes constructing and integrating a regulating basin near the termination of Merced Irrigation District's (MID) McCoy Lateral, the furthest southwestern operational discharge location in the District. MID is required to provide Stevinson Water District with 24,600 AF annualy. The McCoy Lateral is currently one of the waterways in which water is delivered to Stevinson Water District. This basin will increase water supply management through increasing the efficiency, consistency and reliability of deliveries to MID Growers and Stevinson Water District. The project will also allow for the increase in the amount of flows traversing the westerly region of MID, thereby improving the water quality in the area in terms of temperature, decreased algae growth, PH balance and overall suitability for agricultural and landscape use.	Water Supply	43.5
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Data Management	Conceptual	The goal of the Land Management and Multi-Benefit Assessment is to provide Merced County and the California Department of Conservation with a decision-support tool and accounting framework to assess the climate and multiple benefits that may be achieved through a variety of land use, land management and conservation activities. These benefits may be linked to future planning efforts in Merced County and financial incentives available through state programs.	Environment	29.25
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Plan Development	Conceptual	This project consists of LIDAR data of the Merced Groundwater Subbasin. This data will be used in conjunction with weather forecast data to predict local stormflows from rainfall events. The data will be tied to MID's proposed real time modeling of Bear, Black Rascal, and Burns Creeks.	Water Supply	61
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Construction	Conceptual	Merced Irrigation District is proposing automation of certain facilities to enhance Flood-MAR capabilities and expand areas which can be recharged with stormwater events. The project consists of automating certain facilities including but not limited to the Washington Lateral, Northside Canal, Livingston Canal, Le Grand Canal, Caton Lateral, Escaladian Canal, Hammett Lateral, Atwater Canal, Cressey Lateral, and Arena Canal. Currently these canals have manual structures which require frequent human adjustment and inputs to safely manage flows. By automatizing these facilities, the district will be able to safely accommodate volatile and unpredictable storm flows while keeping canal levels high enough for Flood-MAR purposes. Additionally, this project will better manage surface water diversions and increase distribution efficiency by reducing spills.	Water Supply	48
Owens Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	Owens Reservoir was constructed in the early 1950's as an element of the Merced Streams Group Project authorized by Congress's 1944 Flood Control Act. The Flood Control Act of 1970 called for three additional flood control reservoirs, enlargement of existing reservoirs, and 52 miles of levee and channel modifications. To date only one additional reservoir has been built (Castle Dam). The enlargement of Owens Reservoir and downstream levee and channel improvements would increase the level of flood protection to Planada and Le Grand, both DAC's. Owens Reservoir was originally constructed to provide protection for up to a 50-year storm event. The State of California has adopted legislation that calls for a minimum of 200-year flood protection for urbanized areas. This project would meet the requirements of the new flood control legislation.	Flood Management	30.5
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Plan Development	Conceptual	This project consists of modeling Bear, Black Rascal, and Burns Creeks. These three creeks (or the confluence of them) run through the City of Merced and have historically caused flooding to the area. The real time simulation model (RTS) would utilize HEC-RAS and HEC-HMS modeling software. The ability to run real time simulations will improve the ability to forecast flood flows and flood events. This forecasting will be critical in utilizing flood flows for FLOOD-MAR projects in the area. Additionally, it will enable MID to be better prepared for flood flows which happen during the irrigation season. Excess surface water is often conservatively spilled in anticipation of a rain event that occurs during the irrigation season due to lack of forecasting information.	Flood Management	56
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Construction	Planning	This Project entails construction of at least 3 groundwater monitoring wells to evaluate the efficacy of MID's rice field recharge pilot project.	Water Supply	53.5

Merced SWRP 2018
Project Summary

Project Name	Project Proponent	Project Type	Project Status	Project Description	Primary Benefit	Project Score
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Feasibility Study	Conceptual	Merced Irrigation District (MID), LeGrand-Athlone Water District (LGAWD) and Chowchilla Water District (CWD) desire to investigate the feasibility of improving and constructing water conveyance facilities to allow the transferring of irrigation water from MID to LGAWD and CWD. This analysis would review hydrologic data to assess how much water is available from MID for transfer to LGAWD and CWD, when it is available, and how this water availability matches with the demands from LGAWD and the Merced County portion of CWDs service area. A preliminary topographic survey would be performed to gather data on portions of two of the proposed alignments south of the Planada Canal and one south of the Fancher Lateral. A hydraulic analysis of the conveyance system utilizing HEC-RAS computer software would be utilized to bring alternative amounts of water to the districts. A cost analysis for the various options would be prepared.	Water Supply	65

Merced SWRP 2018
Project Score Details

Project Information			Scoring Criteria:	Individual Criterion Scores									
Project Name	Project Proponent	Primary Benefit	Criteria Weights:	SWRP Main Benefits 25%	SWRP Additional Benefits 15%	Is Ready to be Implemented 10%	Right-of-Way / Public Land Status 10%	Local Funding Support 10%	Benefits DACs 15%	Supports TMDLs 5%	Reduces Pollutant Discharges to 303(d)-Listed Water Bodies 5%	Augments Water Supply via Grounwater Recharge 5%	Total Weighted Score -
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Water Supply		100	20	25	0	0	100	0	0	100	50.5
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Flood Management		40	20	25	0	0	100	0	0	0	30.5
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Water Supply		80	40	0	100	100	100	0	0	50	63.5
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		100	40	50	0	100	100	0	100	100	71
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		40	20	25	0	0	100	0	0	0	30.5
City of Merced Storm Drain Master Plan Update	City of Merced, MID	Flood Management		100	80	100	0	0	50	0	0	100	59.5
Crocker Dam Modification	Merced Irrigation District	Water Supply		100	20	0	0	0	100	0	0	100	48
El Nido Recharge Basin	Merced Irrigation District	Water Supply		100	20	0	0	0	100	0	0	100	48
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Water Supply		100	20	0	0	0	100	0	0	100	48
Lake Yosemite Booster Pump Station	Merced Irrigation District	Water Supply		100	20	0	0	0	100	0	0	100	48
Livingston Canal Lining Project	Merced Irrigation District	Flood Management		40	40	100	0	0	50	0	0	50	36
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Water Supply		100	40	0	0	0	100	0	0	50	48.5
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Water Supply		100	40	100	0	0	100	0	0	100	61
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		40	20	25	0	0	100	0	0	0	30.5
McCoy Lateral Regulating Basin	Merced Irrigation District	Water Supply		80	40	0	0	0	100	0	0	50	43.5
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Environment		40	20	100	0	0	25	0	0	50	29.25
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Water Supply		100	40	100	0	0	100	0	0	100	61
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Water Supply		100	20	0	0	0	100	0	0	100	48
Owens Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Flood Management		40	20	25	0	0	100	0	0	0	30.5
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Flood Management		80	40	100	0	0	100	0	0	100	56
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Water Supply		100	40	25	0	0	100	0	0	100	53.5
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Water Supply		100	0	100	0	100	100	0	0	100	65

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Merced SWRP 2018
Project Scores and Rankings

Project Name	Project Proponent	Project Type	Project Status	Score	Tier[1]	Estimated Cost	Primary Benefit
Black Rascal Creek Flood Control Project	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Design	71	1	$ 35,761,703	Flood Management
Study for Potential Water System Intertie Facilities from Merced I.D. to LeGrand-Athlone W.D. and Chowchilla W.D.	Chowchilla Water District	Feasibility Study	Conceptual	65	1	$ 100,000	Water Supply
Black Rascal Creek Flood Control Bypass/ Supplemental Groundwater Supply Improvements	Merced Irrigation District	Construction	Conceptual	63.5	1	$ 1,000,000	Water Supply
Main Canal Offstream Regulating Reservoir Study	Merced Irrigation District	Feasibility Study	Conceptual	61	1	$ 240,000	Water Supply
Merced Groundwater Subbasin LIDAR	Merced Irrigation District	Plan Development	Conceptual	61	1	$ 150,000	Water Supply
City of Merced Storm Drain Master Plan Update	City of Merced, MID	Plan Development	Planning	59.5	1	$ 300,000	Flood Management
Real Time Simulation Flood Control Modeling - Bear Creek	Merced Irrigation District	Plan Development	Conceptual	56	1	$ 100,000	Flood Management
Rice Field Pilot Study Monitoring Wells	Merced Irrigation District	Construction	Planning	53.5	1	$ 250,000	Water Supply
Atwater-McSwain Regulating/Recharge Basin	Merced Irrigation District	Construction	Planning	50.5	1	$ 3,300,000	Water Supply
Main Canal at Head Siesmic Rehab	Merced Irrigation District	Construction	Conceptual	48.5	1	$ 1,600,000	Water Supply
Crocker Dam Modification	Merced Irrigation District	Construction	Conceptual	48	2	$ 1,240,000	Water Supply
El Nido Recharge Basin	Merced Irrigation District	Construction	Conceptual	48	2	$ 500,000	Water Supply
Fairfield Canal/ El Nido Superhighway	Merced Irrigation District	Construction	Conceptual	48	2	$ 3,000,000	Water Supply
Lake Yosemite Booster Pump Station	Merced Irrigation District	Construction	Conceptual	48	2	$ 100,000	Water Supply
Merced Irrigation Flood-MAR Canal Automation	Merced Irrigation District	Construction	Conceptual	48	2	$ 6,500,000	Water Supply
McCoy Lateral Regulating Basin	Merced Irrigation District	Construction	Conceptual	43.5	2	$ 3,282,600	Water Supply
Livingston Canal Lining Project	Merced Irrigation District	Construction	Construction	36	2	$ 3,100,000	Flood Management
Bear Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, & Merced Irrigation District)	Construction	Planning	30.5	2	$ 20,000,000	Flood Management
Burns Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	30.5	2	$ 15,000,000	Flood Management
Mariposa Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	30.5	2	$ 15,000,000	Flood Management
Owens Reservoir Enlargement and Downstream Levee and Channel Improvements	Merced Streams Group (County of Merced, City of Merced, Merced Irrigation District)	Construction	Planning	30.5	2	$ 15,000,000	Flood Management
Merced County Land Management and Multi-Benefit Assessment	The Nature Conservancy; Merced County	Data Management	Conceptual	29.25	2	-	Environment

1. Tier 1 includes projects that scored in the top 50th percentile, Tier 2 includes projects that scored in the bottom 50th percentile. The median score is 48.

Projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.

Project Scoring Guide for SWRP Project List

Component	Criterion	Scoring Procedure	Raw Score Assigned	Final 2018 Weights	
				% of Score	Subtotal
1. SWRP Main and Additional Benefits	Provides SWRP Main Benefits	Score based on # of benefits provided and # of quantitative metrics provided	20 points per Main Benefit met, plus an additional 20 points for every benefit with a quantitative metric provided, to a maximum of 100 points	25	40
	Provides SWRP Additional Benefits	Score based on # of benefits provided and # of quantitative metrics provided	20 points per Additional Benefit met, plus an additional 20 points for every benefit with a quantitative metric provided, to a maximum of 100 points	15	
2. Project Status and Feasibility	Is Ready to be Implemented	Score based on degree of work needed prior to implementation	Ready to construct / implement = 100 pts Preliminary Design Completed = 75 pts Planning Completed = 50 pts Planning in Progress = 25 pts No Work Completed = 0 pts	10	30
	Land Considerations	Score based on right-of-way status	Project is located on public land or has an existing easement or right-of-way agreement = 100 pts Project is not on public land and has no easement or right-of-way in place = 0 pts	10	
	Is supported by entities that have created permanent, local, or regional funding	Score is based on Yes/No response	Yes = 100 pts No = 0 pts	10	
3. Regional Watershed Priorities	Provides a Benefit to Disadvantaged Communities (DACs) (can be a SWRP Main Benefit, SWRP Additional Benefit, or Other Benefit)	Score based on providing targeted benefits to more significantly disadvantaged communities within the region, considering household income and percentage of households below the poverty level	Project directly benefits El Nido, Planada or Franklin/Beachwood = 100 pts Project directly benefits Le Grand or Winton = 75 pts Project directly benefits Atwater, Snelling, Livingston, Stevinson, or DAC areas of City of Merced = 50 pts Provides benefit to regional community benefits but not targeted to a specific DAC = 25 pts Does not provide a benefit to a disadvantaged community = 0 pts	15	30
	Supports existing TMDLs	Score based on number of TMDLs checked	Supports 2 or more TMDLs = 100 pts Supports 1 TMDL = 50 points Supports no TMDLs = 0 points	5	
	Reduces pollutant discharges into a 303(d) listed Impaired Water Body	Score is based on Yes/No response	Yes = 100 pts No = 0 pts	5	
	Augments water supply via groundwater recharge	Score based on whether project provides groundwater recharge and associated quantitative measurement	Provides quantitative measure of groundwater recharge volume = 100 pts Provides groundwater recharge but does not quantify the amount = 50 points Does not provide groundwater recharge = 0 pts	5	
Total:					**100**

Rubric used for projects submitted during Call for Projects from July 9, 2018 to August 31, 2018.