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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
3R	Water Supply / Recharge	Colorado	Ames/Reche Groundwater Storage and Recovery Program - Phase II Expansion	Mojave Water Agency, Bighorn-Desert View Water Agency, Hi-Desert Water District	Marina West and Tony Winkel	Expand the Ames/Reche Recharge Facility to accommodate the maximum potential delivery capacity of 3,000 AF/Yr. (currently permitted for 1,500 AF/Yr.).		Conceptual/In-Progress
13R	Environmental & Recreation	Lahontan	Camp Cady: Tamarisk removal and riparian restoration program	Mojave Desert Resource Conservation District (MDRCD)	Chuck Bell	Invasive species (tamarisk) removal, expansion/improvement of endangered Mohave tui chub habitat and implementation of a sustainable engineered riparian habitat irrigation system.		In-Progress
18R	Conservation & Education	Lahontan	Commercial/Industrial/ Multi-Family Cash for Grass Program	Alliance for Water Awareness and Conservation	Nicholas Schneider	This project would expand the scope of turf removal projects in the Mojave region. Currently, there is a $10,000 rebate cap for commercial, industrial, and mult-family units. This has discouraged larger scale landscape conservation projects. The savings this project can expect is approximately 55 gallons of water saved per year per square foot of grass removed. this would increase our water savings throughout the region based on how much participation we receive in the process.		Ongoing Program
21	Other	Lahontan	Dairy Nitrate Reduction	Mojave Desert Resource Conservation District (MDRCD)	Chuck Bell	Obtain funding – to be matched with NRCS/USDA funding – a possible 25% contribution – to: 1) Help dairies pay to haul manure off-site – likely to fields distant from shallow groundwater and surface waters. 2) Help fund infrastructure designed to apply waste pond water directly to adjacent fields via irrigation systems, etc. – alleviating direct percolation to groundwater. Requires manure “manifest” to track movement and use of nutrients. BMP to effectively use nutrients – applied at agronomic rates. 3) Feasibility study to determine alternate uses of manure for fuels – i.e.: composting/digestion/gasification – what can be done on a regional basis – work in conjunction with VVWRA, etc.		Implementable Program

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27	Flood Management	Lahontan	Dry Well Installation Program, Town wide, Town of Apple Valley	Town of Apple Valley	Greg Synder	If awarded funding, the project would move directly forward with preparation of bid packages to advertise and award a contract for the next phase of program implementation. The contract will construct as many dry well structures as funding will allow. To date approximately 77 shallow dry well structures have been constructed in Apple Valley and are successfully alleviating flooding where they exist. The underlying layers of natural gravel and sand absorb water almost as fast as it can be filtered and introduced into the wells. The Town of Apple Valley Dry Well Standard Design calls for a pre-manufactured dry well structure, and is a combination of an inlet treatment/filtration chamber, (similar to many being used in coastal areas for NPDES related storm water runoff treatment prior to discharge into a water body), combined with a second chamber connected to a shallow lined and perforated well or pit that extends down through the surface layer of impervious soils. The structures average between 35 and 40 feet deep, but are only as deep as required to reach sandy gravelly soil.		Implementable Program
29	Flood Management/Recharge	Lahontan	Forks Dam Storm Water Detention	Mojave Water Agency	Tony Winkel	Although extremely variable on average 41,000 acre feet of storm water flow out of Afton Canyon every 6 years. Based on current State Water Project delivery costs this equates to approximately $16 million worth of "lost" water. The project proposes that appropriate infrastructure could capture a significant portion of this water and allow it to recharge area groundwater systems. This could be accomplished through various diversion structures along the river or make use of the existing Forks Dam to impound storm water. Impounded storm water could be slowly released from the Forks Dam at a rate that would allow percolation rather than run-off though Afton Canyon.		Ongoing/In-Progress
31	Wastewater / Recycled Water	Lahontan	Helendale Community Services District (CSD) - WWTP Effluent Distribution System	Helendale Community Services District	Kimerbly Cox	Design and construction of "Purple Pipe" pipeline system to convey effluent water to nearby Golf Course Irrigation system that currently uses pumped groundwater.		Conceptual
32	Wastewater / Recycled Water	Lahontan	Helendale Community Services District (CSD) Tertiary Treatment Upgrade	Helendale Community Services District	Kimerbly Cox	The District has completed a Recycled Water Facilities Plan which has identified a preferred treatment alternative and cost scenario estimated at $2,670,000 for plant upgrades. The project is designed to produce recycled tertiary water for use within the District service area by improving the WWTP processes to provide unrestricted Title 22 recycled water. The delivery phase is two-stage with minor delivery required to move Title 22 water across the street to Helendale Community Park for landscape irrigation, and the second stage for delivery of Title 22 water to the Silver Lakes Association for golf course irrigation which would require an extensive pump station and force main. The next phase is recycled water storage required to store water during the wet months for use in the dry months and for use by the onsite farming operation. However, this stage of tertiary treatment can be reduced by the implementation of full phase 2 providing recycled water to the SLA golf course.		Conceptual Project
34	Other	Lahontan	Hydroelectric Facility at Deep Creek to generate power for R3 ground water wells	Mojave Water Agency	Darrell Reynolds	The Deep Creek Outlet to the Mojave River can generate electrical power for use by the Agency to power the R3 groundwater wells. Two options are possible: 1) construct Groundwater wells at Deep Creek FCF and extend the R3 pipeline to these wells. Our run Conduit and conductors from Deep Creek to the R3 Groundwater wells.		Conceptual/In-Progress

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36R	Individual or Small System Improvements	Colorado	Infrastructure Improvements Projects	Joshua Basin Water District	Mark Ban - mban@jbwd.com - 760-974-0049 ext. 224	Design and Construction of infrastructure replacements to improve efficiency and increase conservation of resources. Particular emphasis on water booster station improvement to reduce energy impacts (i.e. reduce in-rush impacts on pump start-up and increased efficiency of equipment.		Conceptual
38R	Wastewater / Recycled Water	Colorado	JBWD Central Wastewater Treatment Plant Project	Joshua Basin Water District	Curt Sauer - csauer@jbwd.com - 760-974-0049 ext. 226	Design and construction of required central WWTP to include plant siting, WWTP design, trunk sewer alignment and design, environmental compliance, permitting and construction. Central WWTP provides long-term control of nitrate contamination in groundwater basin, as well as other contaminants identified in past studies.		Conceptual
40R	Conservation & Education	Colorado	JBWD Graywater & Rainwater Harvesting Project	Joshua Basin Water District	Curt Sauer - csauer@jbwd.com - 760-974-0049 ext. 226	Development of design standards and funding of on-site collection facilities for capture of graywater and rainwater by individual property owners located in the JBWD service area. Water collected would be used for gardening and other non-potable uses, reducing dependence on groundwater. Public education is an important component of the project and will include printed materials and demonstration models of collection facilities. Project compliments the District's new imported water recharge project and educates property owners about how graywater and rainwater collection can contribute to increasing local water supplies and conserving groundwater.		Conceptual
41R	Flood Management	Colorado	JBWD Stormwater Recovery Project	Joshua Basin Water District	Curt Sauer - csauer@jbwd.com - 760-974-0049 ext. 226	Capture and retain stormwater from local arroyos into the new recharge basin to enhance percolation potential into the groundwater basin. Includes studies to determine quantities of stormwater that could be recharged, engineering feasibility for retention and percolation and environmental review. Project would increase groundwater basin recharge and minimize downstream impacts.		Feasibility Study
42R	Individual or Small System Improvements	Colorado	Johnson Valley Pressurized Water System	Bighorn-Desert View Water Agency	Marina West	Approximately 1/3rd of the Agency's service area is without a pressurized water supply. Residents in these areas rely on hauled water (self-haul or commercial delivery). Property owners are now prohibited from building or improving their property using hauled water as the water supply. Project would bring a pressurized water distribution system to the area to improve quality of life, public health and provide for enhanced fire protection.		Conceptual
49	Environmental & Recreation	Lahontan	Mojave River Walk Trail	City of Victorville	Carlos Seanez (760) 955-5162	Walking / biking trail along the Mojave River. Combined recreational and public education project involving multiple participating agencies.		CEQA Complete, In-Progress, Construction Underway
54	Water Supply / Recharge	Lahontan	Oro Grande Wash Groundwater Recharge Project	Mojave Water Agency	Darrel Reynolds	The Oro Grande Wash Groundwater Recharge Project has an ultimate delivery capacity for approximately 8,000 AF. The trunk facilities are designed to flow the full capacity. The Flow control facility and pipeline into the wash is designed to flow half of the capacity into a joint use San Bernardino County Flood Control Detention/Recharge Basin. This project (Phase 2 of the Oro Grande Wash Project) is to construct a second pipeline to the Wash and to another groundwater recharge area between Amethyst and Bear Valley Road.		In-Progress, Construction underway
56R	Water Supply / Recharge	Lahontan	Alto Subarea Regional Aquifer Storage and Restoration (ASR2)	Mojave Water Agency	Tony Winkel	The Alto Subarea Regional Aquifer Storage and Restoration (ASR2) project would use water from the Mojave Water Agency R-Cubed infrastructure to inject potable water into existing municipal wells in the regional aquifer. Injection would be timed to periods when these wells would not normally be in service (fall-winter). Injected water would be available for immediate use by purveyors during normal demand periods (spring- summer). This project uses existing equipment with very little new infrastructure. Costs incurred would be for minimal retrofitting at wellheads, periodic well cleaning, and injected water.		Conceptual

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57	Wastewater / Recycled Water	Lahontan	Recycled Water Distribution System	City of Hesperia	Mike Thornton	Construct a water distribution system for the conveyance of recycled water from the proposed Subregional Treatment Plant in the City of Hesperia. The system would include a non-potable reservoir near the Subregional site, booster pumps, and approximately seven miles of "purple" pipeline to convey recycled water to the Hesperia Golf Club and several other users throughout the City.		In-Progress, Prop. 84 Drought Round-approximately 9 million dollars Project
58	Water Supply / Recharge	Both	Regional Aquifer Recharge Capacity	Mojave Water Agency	Tony Winkel	MWA has very little off-river aquifer recharge capacity. During wet periods, when SWP water is plentiful and "cheap," the river is likely to be full and unable to accept recharge. MWA needs to be able to accept large a quantity of water in a relatively short (wet) period. This could be accomplished through a variety of infrastructure. Once such infrastructure combination could include surface water impoundment for later distribution to recharge ponds, ASR injection wells, etc... In addition this project could easily be expanded to a water bank with an aqueduct pump-back component for "buy low/sell high" of banked water.		In-Progress
60R	Other	Colorado	Reorganization between two adjacent small water agencies (BDVWA and CSA 70 Zone W-1 [Landers])	Bighorn-Desert View Water Agency	Marina West	Initiate reorganization through LAFCO. Provide for LAFCO processing fees, boundary map, preparation of TFM Report (Technical, Financial and Managerial) plan for operation of consolidated entities and evaluate physical infrastructure tie-in. Possible need for Master Plan identifying infrastructure improvements and build-out requirements.		In-Progress/ Planning Grant Awarded
63	Flood Management	Lahontan	Sheep Creek Wash Storm Water	Phelan Piñon Hills Community Services District	Don Bartz	The Sheep Creek Wash Storm Water Retention project is intended to capture storm water and recharge the Oeste Basin. The intent is help minimize storm water damage at the same time generate additional water consumption that would benefit the District anticipating the possibility of the additional ramp down on pumping from the basin from the current 80% to the anticipated 60%. This conceptual plan would require diverting storm water flows from Sheep Creek Wash to a proposed recharge basin. Storm water flows would be monitored at the inlet of the basin. A proposed monitoring well will also be used to monitor static levels.		Conceptual
65	Water Supply / Recharge	Both	State Water Project Utilization & Efficiency Strategy	Mojave Water Agency	Kathy Cortner	Conceptual program with an overall goal to make the best use of the Region's State Water Project resources for maximum benefit to the Region. This would be an ongoing program with many possible elements and would explore a variety of opportunities to achieve the goal, including transfers, exchanges, purchases and sales of SWP water in concert with conjunctive use, groundwater and surface water storage programs, etc.		Conceptual

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68R	Flood Management	Colorado	Storm Water Retention and Percolation in Hondo Wash Ruby Wash	Bighorn Desert View Water Agency	Marina West	Retain storm flows in Hondo Wash and other drainages in the area to enhance percolation potential into Ames groundwater basin (Pipes Subbasin) and provide a mechanism for flood control that does not currently exist. Includes studies to determine quantities of flow that could be captured annually, engineering feasibility for retention and percolation, and environmental impact overview (Initial Study). Water could be retained behind shallow berms or even dam structures along narrow sections of the wash. Water that is successfully captured and percolated minimizes downstream flood damage from scouring and preserves a resource that is otherwise wasted (flows to dry lake bed for evaporation).		Conceptual
72	Individual or Small System Improvements	Colorado	Twentynine Palms Fluoride Treatment Plant Expansion	Water Supply / Recharge	Ray Kolisz	The District maintains a fluoride variance from DPH due to naturally occurring, high levels of fluoride in the groundwater, the District's only source of supply. The variance expires in ten years and additional source development is needed to mitigate the water quality changes. In the Mesquite Springs aquifer of the Twentynine Palms Groundwater basin, a second Fluoride Treatment Plant is needed for system redundancy. Project engineering will determine the size and volume of the plant that will produce the most cost-effective results for additional source development within the aquifer, protecting safe yield and preventing drawdown of the Indian Cove and Fortynine Palms aquifers.		Study, Design, Construction
74R	Individual or Small System Improvements	Colorado	Water Infrastructure Restoration Program: Pipeline Installation/ Replacement Project	Bighorn-Desert View Water Agency	Marina West	The existing BDVWA infrastructure has deficiencies which prevent it from meeting fire flow due to heavy reliance on 6-inch water mains and Class B fire hydrants; an inability to refill most reservoirs overnight after a 500-gallons per minute fire; and inefficient operation of two zones (E-2 and E-3) due to the manner in which they were originally constructed. Project would improve pressure, fire protection and public safety.		Conceptual
86	Individual or Small System Improvements	Colorado	Alta Loma Reservoir Replacement	Hi-Desert Water District	Ed Muzik	Increase of 1 MG in water storage capacity to ensure adequate emergency storage (current 250k deficit).		Conceptual
92R	Wastewater / Recycled Water	Colorado	Wastewater Reclamation Project	Hi-Desert Water District	Samantha Mena Administrative Assistant; SamanthaM@Hdwd.Com; Desk: (760) 228-6272	The District's Wastewater Reclamation Project has been determined to be the most viable method of ensuring the Town's compliance with the Regional Board's adoption of the septic tank discharge Prohibition. The project will provide centralized treatment of wastewater generated within the Town at a level consistent with that of the local discharge requirements of both the Regional Board and the CDPH. Wastewater will be collected and conveyed through a series of pipelines that make up the WRP's collection system. Once delivered to the treatment facility, the treated wastewater will be discharged into the East Hydrogeologic Subunit of the Warren Subbasin providing a future source of extractable groundwater.		Construction Underway
94R	Individual or Small System Improvements	Lahontan	Fluoride and Arsenic Treatment	City of Adelanto	John R. Sponsler	Construct an Arsenic and Fluoride Treatment System for Potable Well 8A, 5A and 4. Wells are in violation of current EPA MCL's.		Conceptual

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95	Wastewater / Recycled Water	Lahontan	Adelanto Pearmain Relief Sewer Line	City of Adelanto	Brian Wolfe, City Engineer	The project would consist of the installation of 12 to 18 inch sewer main and manholes from the waste water treatment plant on Auburn to the intersection of Air Expressway and Pearmain. Project would also connect new County HS that is built but not opened due to lack of County funding. However, if/when school does open, the current existing Adelanto sewer does NOT have enough capacity to convey projected school ww flows.		Implementable Project
97	Wastewater / Recycled Water	Lahontan	Adelanto Reclaimed Water Delivery Infrastructure	City of Adelanto	PERC Water, Bob Nespeca or Dave Kachelski.	Adelanto recently completed expansion of wwtp from 2.5 mgd to 4 mgd. Put in place option to construct tertiary facilities if potential users of RW become available. Currently, the obvious downstream user is the City of Victorville and the HDPP power plant. This project is a feasibility study to consider options for expanding the wwtp to tertiary and evaluating potential rw users for viability both hydraulically and need.		Conceptual
98R	Wastewater / Recycled Water	Lahontan	Rehabilitation of Sewage Lift Station	City of Adelanto	PERC Water, Bob Nespeca or Dave Kachelski.	Install new larger sewage lift station pit and pump station. Install new pumps and SCADA to same. Install new liner, SCADA communications. Work needed to prevent Sanitary Sewer Overflows.		Conceptual
101	Flood Management	Colorado	Cushenbury Flood Detention Basin	Mojave Water Agency	Chuck Bell	Proposed to capture runoff from the San Bernardino Mountains in the Lucerne Valley Subbasin. Currently, large storm flows drain to dry lake beds in the area that have low percolation rates. Consequently, the majority of water that drains to the lake beds is lost to evaporation and never enters the basin. The project would divert storm flows to detention basins with high rates of percolation to decrease losses from evaporation.	2004 RWMP	Conceptual
102	Wastewater / Recycled Water	Colorado	Local Wastewater Treatment Plant (Lucerne)	San Bernardino County	Chuck Bell	Wastewater treatment in the region is currently provided by individual septic tank systems. It is likely that at some point in the future, a municipal wastewater treatment facility will have to be built. (description from 2004 RWMP)	2004 RWMP	Conceptual
103	Water Supply / Recharge	Colorado	Lucerne Valley Recharge Ponds	Mojave Water Agency	Tony Winkel	Provides an opportunity for recharge in the Este Subarea. Recharge sites have been contemplated both east and west of the Helendale Fault. The 1994 RWMP recommended constructing a facility east of the fault because the majority of pumping occurs east of fault. MWA has purchased land for a recharge facility, prepared preliminary construction plans, and performed the necessary environmental reviews.	2004 RWMP	Project In-Progress
106	Water Supply / Recharge	Lahontan	Sheep Creek Recharge Basin and Two Wells	Phelan Piñon Hills Community Services District	Don Bartz	Recharge Basin from State Water Project along with 2 pumping wells. The purpose for this project is to purchase water from State Water Project in the future. Currently the District pumps 100% of its water with natural recharge of the basin. With future growth comes future water demand the District is looking at utilizing the Sheep Creek California Aqueduct turn-out to extract state water to recharge the proposed basin utilizing the proposed pipeline. The two proposed wells will be used to pump water into our distribution system. They will also serve to monitor static and pumping levels of the ground water.	Sheep Creek Recharge Ponds - 2004 RWMP	Conceptual
115	Environmental & Recreation	Both	Land and Water Rights Acquisition	California Department of Fish & Wildlife	Alisa Ellsworth	Acquire voluntary water transfers or water rights to reduce water use. Acquire riparian habitat along the Mojave River either in fee title or through the purchase of a conservation easement.		In-Progress/ Ongoing

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116	Water Supply / Recharge	Lahontan	Replacement Water Supply for Perchlorate/Nitrate Affected Groundwater - Barstow Area	MWA/Lahanton RWQCB/DPH grant	Bill Muir & Alonzo Poach	Perform a feasibility study to determine the most cost effective and sustainable manner to design, construct and operate an alternative water supply for residents adversely affected by perchlorate and nitrate polluted groundwater in an unincorporated area northeast of Barstow.		Conceptual
117	Other	Both	Water Supply and Quality	San Bernardino County Special Districts Department	Steve Samaras	Water quality and supply projects to meet existing and emerging regulatory requirements. Development of strategically constructed facilities to support and mitigate regional water quality and supply issues.		Conceptual; Feasibility
118	Conservation & Education	Lahontan	Weather Based Irrigation/Completion of Demonstration Garden Project	Barstow Community College	Rick Hernandez	This proposed project introduces Smart Controllers to maximize irrigation control of water use during the extreme environment condition and helps to manage water use in a normal environment as well. Smart Controllers would create an efficient schedule and give the ability to accommodate micro bursts and downpours of rain. The completion of the Barstow Community College garden project will give way to a High Desert regional concept.		In-Progress/ Construction underway
121	Individual or Small System Improvements	Lahontan	Rehabilitate pre-1960 pipelines	Lake Arrowhead Community Services District (CSD)	Catherine Cerr	Miles of old wastewater pipelines are in need of rehabilitation.		Implementable Project
122	Wastewater / Recycled Water	Lahontan	Effluent Outfall Replacement Project	Lake Arrowhead CSD	Catherine Cerr	Replace and upsize the existing effluent outfall pipeline, which travels approximately ten (10) miles and drops 1,200 feet in elevation to property owned by LACSD in Hesperia.		Conceptual
125	Flood Control	Both	Gage Tributary Washes	MWA	Tony Winkel	There has been ongoing discussion for years regarding storm water flow volume and basin contribution from ungagged desert washes. Simple gages could be installed at road under-crossings. These crossings often have concrete lined channels which makes them ideally suited as ready-made weirs for ephemeral stream gages. Place a pressure transducer in a one-foot steel pipe with holes drilled in it and bolt it to the side of the concrete channel and key washes could be accurately gaged for storm flow.		Conceptual and Implementable
126	Conservation & Education	Lahontan	Community Park and Demo Garden	Helendale CSD	Cheryl Vermette	Helendale Community Park is only partially constructed. Current irrigation is using temporary agricultural pipe connected to our Ag well to irrigate a small section of grass. Project installs and maintains grass fields which will mitigate the blow sand and provide a community park play area for under-served children within the CSD boundary.		In-Progress/ Near Complete
127	Individual or Small System Improvements	Lahontan	Water Well No. 10	Helendale CSD	Craig Carlson	Design and construction of new water supply well (Designated as Well #10) to replace old low-volume production wells which also are showing Gross Alpha emitters as well as arsenic contamination. The project includes the purchase of a well site, drilling of the well, full equiping and testing, easements for a transmission line from well site to connect to current southern terminous of the District water system.		Conceptual

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128	Water Quality	Lahontan	Transition Zone Water Quality Study	MWA	Anna Garcia	Water quality constituents have impacted beneficial use of groundwater in the region around the Helendale fault. Water quality anomalies were further identified in the 2003 URS Transition Zone Report and the 2007 Schlumberger Salt Model Report. The dataset has matured since these earlier studies were completed and this would be a good point to take another look at the data and try to further our understanding of the groundwater chemistry affecting this area. Work could include water quality testing, drilling and well installation, geophysical investigations, and any other scientific techniques that may result in a better understanding of the water quality conditions in the region.		In-Progress
129	Individual or Small System Improvements	Colorado	Well Abandonment	Hi-Desert Water District	Ed Muzik	HDWD has identified 40 private and public wells within the Warren Valley Subbasin that require either destruction or protective measures to be installed. This project focuses on providing funding to well owners to complete the necessary work in an effort to protect the groundwater basin.		Implementable
1001	Wastewater / Recycled Water	Lahontan	Sewer Lift Station or Reverse Osmosis Treatment Plant	City of Victorville	Steve Ashton	The lift station is preferred over the RO plant due to the ongoing operational and maintenance costs associated with RO. The RO project could integrate with other recycled water projects in the region, such as with the City of Adelanto; however, VSD 4 lift station is preferred over this project due to the ongoing operational and maintenance costs associated with reverse osmosis. Integrates Projects 17 and 61.	Integrates Projects 17 and 61.	Conceptual; Implementable, In-Progress
1003	Individual or Small System Improvements	Both	Assistance Program for Small Drinking Water Systems	Mojave Water Agency, San Bernardino County Environmental Health Services	Matthew Howard and Joy Chakma	Program would identify water supply, water quality and infrastructure needs of small drinking water systems within the IRWM Region. Small systems needs may include but not limited to: Water quality treatment systems, fireflow protection, replacing aging infrastructure, install new infrastructure, interconnection with other purveyors, well drilling, scada systems, feasibility studies, etc. This program would help connect small systems to available funding by identifying funding sources, assisting with grant applications and paperwork, etc. Sources of funding could include State and Federal funds from a variety of programs designed to help small systems in the identified challenges listed. Integrates Projects 6, 7, 15, 44, 45R 52, 69, 80, 83, 84, 85, 100, and 120.	Integrates Projects 6, 7, 15, 44, 45R, 52, 69, 80, 83, 84, 85, 100, and 120.	Ongoing/In-Progress
1008	Water Supply / Recharge	Lahontan	R-Cubed Enhanced Purveyor Supply System	Mojave Water Agency	Perry Dahlstrom and John R. Sponsler	Design and install conveyance from R-Cubed to purveyors not currently connected to R-Cubed. This may be through direct conveyance or via interconnections with purveyors currently receiving R-Cubed water to “wheel” water to purveyors adjacent to their systems. The project includes study, design and facilities. Integrates Projects 37, 96, 124.	Integrates Projects 37, 96, 124.	Conceptual Design In-progress
1010	Conservation & Education	Colorado	JBWD CUWCC Compliance Project	Joshua Basin Water District	Curt Sauer - csauer@jbwd.com - 760-974-0049 ext. 226	Urban water management planning requires planning, design and implementation of a variety of best management practices for the purposes of increasing conservation, educating the community on water issues, and reducing wasteful water practices. A large component of the proposed project is a system-wide leak detection program. Integrates Projects 39 and 99.	Integrates Projects 39 and 99.	Conceptual
1011	Water Supply / Recharge	Lahontan	Antelope Valley Wash / Ranchero Basin Recharge Ponds	City of Hesperia, MWA, SBC Flood Control	Tony Winkel and Tom Thornton	The Ponds would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 65 acre site for a storm water detention basin in the Antelope Valley Wash south of the newly constructed Ranchero Road. In addition to storm water detention, the site would be able to accommodate groundwater recharge. Integrates Projects 4 and 109.	Integrates Projects 4 and 109.	Conceptual Design, In-Progress
1012	Water Supply / Recharge	Lahontan	Cedar Street / Bandicoot Detention Basin	City of Hesperia, MWA	Tom Thornton	The Basin would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 120 acre site for a storm water detention basin at the east end of Cedar Street and southwesterly of the California Aqueduct. In addition to storm water detention, the site would be able to accommodate groundwater recharge. Integrates Projects 14 and 107.	Integrates Projects 14 and 107.	Conceptual Design

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1013	Baja / Ag Issues	Both	Baja Sustainability Initiative #4 (Well Assistance Program)	Baja Sub-Advisory Committee	Matt Howard	Financial assistance program to provide low interest loans and grants to help low income individuals finance the costs for construction, refurbishment or service of their individual household water wells. May also include requests for financial assistance for SPW from Mojave River Pipeline. Integrates Projects 26 and 81R.	Integrates Projects 26 and 81R.	In-Progress, Wells being drilled
1014	Conservation & Education	Both	Water University	Mojave Water Agency, Alliance for Water Awareness and Conservation, JBWD	Nicholas Schneider	The Water University Program is a comprehensive educational and outreach program targeting teachers, real estate professionals, the business community, as well as the general public. This four-component program would offer curriculum for teachers to use in their classrooms for use in science and social studies classes. The second education component targets Fire Departments with education materials and presentations for greater water efficiencies. The third component targets businesses and the real estate community with water conservation information including native landscaping tips, and free water savings devices for the home including sprinkler nozzles, shower heads, etc. The fourth component targets irrigation supervisors and contractors by offering a certificate program in water efficiency. This component would include regular workshops and education materials. The final component is aimed at homeowners to better educate them on water conservation. Integrates Projects 30, 78, and 79.	Integrates Projects 30, 78, and 79.	In-Progress/Ongoing
1015	Flood Management - County	Both	SB County Integrated Flood Projects	SB County Flood Control District	Michael Fam, mfam@dpw.sbcounty.gov 909 387-8124	Flood projects throughout the Region all completed by SB County Flood Control District. Integrates Projects 108-114.	Integrates Projects 108, 110-114.	Conceptual and Design

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2001	Water Supply / Recharge	Both	Annual Cooperative Water Resources Program between the Mojave Water Agency and the United States Geological Survey	Mojave Water Agency	Anna Garcia	A cooperative water resources program between the Agency and the USGS has been in place since October 1991. The program has served, and continues to serve, as an integral part of the Agency's ability to understand and manage the basin(s). The extension of the program for the 2015-2016 fiscal year will be crucial to MWA's ongoing basin management efforts. The elements of this cooperative agreement consist of: 1. Basin Wide Groundwater-Level and Water-Quality Monitoring Network - USGS Staff monitor water levels and collect water quality samples at selected wells to supplement MWA's internal monitoring program. These additional data points enable the MWA to maintain a more robust monitoring network across our Service Area. 2. Surface-Water Monitoring and Water Quality - The USGS maintains five streamflow gaging stations along the Mojave River drainage system. Streamflow gaging stations are located at Deep Creek, West Fork, the Lower Narrows, Barstow, and Afton. In addition to streamflow monitoring, the USGS also monitors water quality at three of these locations. The stream gaging data and surface water quality data are maintained on the USGS' National Water Information System (NWIS) website. 3. Review and Storage of MWA Water-Level and Water-Quality Data - The USGS has been maintaining MWA collected water level and water quality data on the NWIS website since FY 2008. This enables our constituents, Board members, MWA staff, and any interested parties to access our data at any time. 4. Monitoring Regional Water-Level Changes and Subsidence - The USGS has monitored regional water levels and produced biennial groundwater contour maps since 1992. This work allows the review of water level changes over time across our Service Area and the greater Mojave Desert region. The USGS will also gather and analyze land subsidence data for the region as part of this year's agreement. The data from this work will be integrated with previous subsidence studies completed by the USGS for the Agency to produce a USGS Fact Sheet on subsidence across the region. 5. Trace-Element Occurrence and Geochemistry - Work under this year's Program Letter will include analyzing alluvial sediments and groundwater samples for trace element (e.g., arsenic, chromium, manganese, etc.) concentrations and evaluating the mobility of trace elements from aquifer materials into groundwater. Associated tasks will include comparing sediment trace element distribution, abundance and mobility data with oxic-alkaline groundwater		On-going

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
2002	Individual or Small System Improvements	Both	Chromium-6 Treatment Assistance Program	Mojave Water Agency	Matthew Howard	The California State Water Resources Control Board recent adoption of a Maximum Contaminant Level (MCL) for hexavalent chromium of 0.010 mg/L (10 µg/L) on July 1, 2014, has caused an issue with many systems in the Mojave IRWM Plan to be able to provide safe drinking water that meets the new standard. This program would provide assistance to systems to collaborate with state and federal funding agencies to help meet the challenges and cost of hexavalent chromium treatment. Mojave Water Agency using Department of Public Health data show that there are systems within the Mojave IRWM Plan that are affected by the new MCL for hexavalent chromium. Systems that are included in this program but not limited to: Joshua Basin Water District Phelan Pinon Hill Community Service District County of San Bernardino CSA 70J Thunderbird County Water District West End Mutual Water Company Apple Valley View Mutual Water Company Gordon Acres Water Company Daggett Community Services District 29 Palms Water District (added July 2016)		On-going
2003	Water Quality	Both	Mojave IRWM Plan Regional Water Quality Sampling Project	Mojave Water Agency	Matthew Howard	The Mojave IRWM Plan Regional Water Quality Sampling Project is a project that will take on the task of performing regional water quality collection and analysis across the Mojave IRWM Plan area. The project will focus of selecting key wells from the Mojave IRWM Plan area and sampling these key wells at strategic times and locations. The project will have the goal of a sub-area of the Mojave Water Agency (MWA) sampled every five years in a rotating fashion. Other high priority area's of the MWA watershed (such as the Upper Mojave Watershed) will be sampled at a higher frequency due to the groundwater pumping influence in this area. Samples will be collected and transported to state certified laboratory contracted with MWA and analyzed for a variety of constituents. The Lab will then generate a report of their analyses and MWA will review and approve the report. The data will then be imported into MWA's database and used from scientific purposes (Reports, graphs, and presentations). Data will be available to the public via public information request to MWA or accessing the data via the National Water Information System (http://waterdata.usgs.gov/nwis) through cooperative partnership with the United State Geological Survey.		On-going

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
2004	Wastewater / Recycled Water	Lahontan	Septic System Connection to Sewer Grant Program	City of Victorville	Brian Gengler	The City is proposing to connect to the City's sewer collection system a specified number of developed and occupied buildings, currently served by septic treatment systems, over a three year period. Priority projects will be for a target area in Old Town (between A St, and D St. and 1st St. and 11th St.) where properties are adjacent to an existing sewer main and usually only a lateral connection will be required. The Old Town area has a high water table, is close to the Mojave River, and is an economically disadvantaged area of the City. 28 single family residences and two small apartment complexes one with 8 and the other with 9 units have been preliminarily identified for septic to sewer connection. In addition, the target areas with the highest priority would be areas with a high water table, in proximity to known contaminants in the soil or ground water or that has economically disadvantaged residents. Another criteria for selection would be for a property where a septic system fails and must connect to sewer in accordance with the city's code or receive a variance from City Council based on hardship.		
2005	Wastewater / Recycled Water	Lahontan	Barstow Recycled Water Plan	City of Barstow/Golden State Water Company	Perry Dahlstrom/Kody Thompkins	Provide assistance to devlop recycled water plan that would provide phased projects that could be completed in future years.		Conceptual
3001	Individual or Small System Improvements	Colorado	Joshua Basin Water District Tillford Way Pipeline Project	Joshua Basin Water District	Mark Ban - mban@jbwd.com - 760-974-0049 ext. 224	The Tillford Way Pipeline Project is a Tier 1 priority project for the District based on its score pursuant to the Capital Improvement Pipeline Replacement Evaluation Process. 55% of this pipeline is currently undersized. The project would elimiate the undersized section and upgrade it, improve fire suppression by 23 %, and repolace all inoperable valves within the project area. This project will minimize water loss as a result of leaks on piplies where there is the inability to isolate or throttle down sections of pipelines during leaks.		Conceptual
3002	Individual or Small System Improvements	Colorado	Joshua Basin Water District Replacement Meter Project	Joshua Basin Water District	Mark Ban - mban@jbwd.com - 760-974-0049 ext. 224	The District is seeking grant funding for replacement of its current meters to Automatic Meter Reading (AMR) technology. The meters are two-years past their useful life, and reports indicate that they are underreporting revenues by 2-4% or up to $72,000 per year. This project will help to increase water use efficiency and improve overall water management on a District-wide scale and will address deficiencies noted in the System Wide Audit by providing highly accurate, meter reading capabilities at residential and commercial sites. Implementation of this project will enable leaks and unusual water usage to be identified and addressed, ultimately reducing overall water demand.		Conceptual

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
3003	Water Quality	Colorado	Twentynine Palms Water District Development of Well 11B	Twentynine Palms Water District	Ray Kolisz	The Twentynine Palms Water District (District) provides drinking water for a population of approximately 15,000 covering the Twentynine Palms community as well as outlying areas. The District relies entirely on groundwater to serve its residents for drinking water and a number of District wells have been recently taken offline due to hexavalent chromium levels above water quality levels. In early November 2016, the District's Well No. 11 stopped producing. Investigation into the cause found major deterioration of the well, likely due to age, and the well was indefinitely taken offline. The District is performing the preliminary investigation to replace the lost capacity of its wells possibly through construction of a "new Well No. 11B". It is understood that any new well must meet the standards for drinking water including the Cr VI, Arsenic and Fluoride that is anticipated to be elevated in the water. The well was drilled in 2018, next steps include outfitting the well with a pump and motor, and bench scale testing for arsenic and fluoride. Once the necessary groundwater quality treatment needs are determined, the District would move forward with engineering and construction of a treatment system.		In-Progress
3004	Water Quality	Colorado	Redundancy Well for Flouride Treatment Plant Project	Twentynine Palms Water District	Ray Kolisz	The District currently has one existing supply well, TP-1, which provides approximately 40 percent of District supply, that is equipped with a treatment system which removes naturally-occurring fluoride from the water. Fluoride concentrations within the District range between 0.34 to 2.6 mg/L, at times higher than the statewide MCL of 2.0 mg/L. In 1993, the District was granted a variance from the MCL, which allows the District to meet the higher federal drinking water standard of 3.0 mg/L. Anticipating expiration of the variance in 2023, the District is concerned about providing both fluoride treatment capability for two additional wells which contain fluoride at concentrations exceeding the MCL, and also for providing a redundant supply, in the event that well TP-1 is unavailable for an extended period of time.		In-Progress
3005	Individual or Small System Improvements	Colorado	Twentynine Palms Water District AMI/AMR Smart Meter Upgrade Project	Twentynine Palms Water District	Ray Kolisz	The District is seeking grant funding for the upgrade of its current meters to Advanced Metering Infrastructure (AMI)/Automatic Meter Reading (AMR) technology. This project will help to increase water use efficiency and improve overall water management on a District-wide scale and will address deficiencies noted in the System Wide Audit by providing highly accurate, meter reading capabilities at residential and commercial sites. Implementation of this project will enable leaks and unusual water usage to be identified and addressed, ultimately reducing overall water demand. The District intends to implement a pilot project to determine the potential water savings before implemeting the meters on a District-wide scale.		In-Progress
3006	Conservation & Education	Colorado	Sustainable Management, Affordability, & Reliability for Twentynine Palms Plan ("SMART Plan")	Twentynine Palms Water District	Ray Kolisz	Twentynine Palms Water District faces challenges in three distinct areas: 1) Thwarting threats to groundwater quality; 2) Maintaining affordability for customers while protecting safe drinking water; 3) Updating our water conservation efforts. The objective of SMART Plan is to protect water quality, affordability and supply. The proposed project would implement efforts of the SMART Plan via technical review and project identification, research into funding and financing, stakeholder outreach to ensure outreach and transparency, and groundwater data collection.		In-Progress

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
3007	Water Quality	Colorado	Twentynine Palms Water District Salt and Nutrient Management Plan (SNMP) Groundwater Monitoring Project	Twentynine Palms Water District	Ray Kolisz	In June of 2014 the District prepared a SNMP that has the primary purpose of developing a strategy for the District, along with the City of Twentynine Palms to monitor and protect the groundwater resources in the Twentynine Palms area. The SNMP recognizes and addresses the increased need to assess potential groundwater quality impacts from salt and nutrient sources that are derived primarily from septic tanks in the Twentynine Palms area. The project proposes to implement the recommendations in the SNMP which include increased sampling of the District's existing production wells, establishing a water quality monitoring well network, and installation of new monitoring wells.		In-Progress
3008	Individual or Small System Improvements	Colorado	JBWD's Saddleback Water Main Repalcement Project	Joshua Basin Water District	Randy Mayes	The Saddleback Water Main Replacement project is a 23,500 linear foot construction project that contributes towards the elimination of undersized pipes, improvement of fire suppression capabilities, increase in capacity to eliminate material scoring, and replacement of inoperable valves. The CIRP is a long term, multi-year program that will utilize District staff to complete projects that include but are not limited to the replacement of watermains, service lines, fire hydrants, meters and other water related appurtenances. This project has been determined to be a Class 1 Categorical Exemption under Article 19. CEQA Section 15301. Exisiting facilities. JBWD's DAC customers spend approximately $4.40 for every hundred cubic foot of water consumed. The Census Designated Place of Joshua Tree makes up a significant portion of JBWD's service area. Joshua Tree has an average MHI of $38,297, just 62% of the California Statewide MHI. The census tracts and block groups that overlap with the rest of JBWD's service area have MHIs ranging from $18,125 to $45,089 (29% to 73% California MHI). With this in mind, the District in 2015 spent $0.18 on mainline leak repairs for every $1.00 spent on water production. Ov/er the course of the past three years, the potable water system leaks contributed towards an increase to $0.28 for every $1.00 spent. This significant increase in water cost is passed down to JBWD's DAC.		Implementable Program
3009	Individual or Small System Improvements	Colorado	Sunburst Water Main Repalcement Project	Joshua Basin Water District	Randy Mayes	The Sunburst Water Main Replacement project is a 21,500 linear foot construction project that contributes towards the elimination of undersized pipes, improvement of fire suppression capabilities, increase in capacity to eliminate material scoring, and replacement of inoperable valves. The CIRP is a long term, multi-year program that will utilize District staff to complete projects that include but are not limited to the replacement of watermains, service lines, fire hydrants, meters and other water related appurtenances. This project bolsters one of the District's K-6 institutional facilities. JBWD's DAC customers spend approximately $4.40 for every hundred cubic foot of water consumed. The Census Designated Place of Joshua Tree makes up a significant portion of JBWD's service area. Joshua Tree has an average MHI of $38,297, just 62% of the California Statewide MHI. The census tracts and block groups that overlap with the rest of JBWD's service area have MHIs ranging from $18,125 to $45,089 (29% to 73% California MHI). With this in mind, the District in 2015 spent $0.18 on mainline leak repairs for every $1.00 spent on water production. Over the course of the past three years, the potable water system leaks contributed towards an increase to $0.28 for every $1.00 spent. This significant increase in water cost is passed down to JBWD's DAC.		Implementable Project

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Project Type
22	Lahontan	Deep Creek Off-River Recharge And Storage Basins	Mojave Water Agency	Darrell Reynolds and Tony Winkel	Off River recharge and storage basins on the Deep Creek Properties		Complete, Not looking for funding
59	Both	Regional Flood Control/Flood Management Plan	Mojave Water Agency	Lance Eckhart	Prepare a multi-jurisdictional, regional flood control / flood management plan that integrates flood data and information, coordinates flood control efforts and infrastructure, and seeks to integrate flood management and water supply projects across the Mojave IRWM Region.		Completed
64	Lahontan	Silver Lakes Association Stormwater Debris - retention basin	Silver Lakes Association	Kimberly Cox	Design and construction of a reinforced concrete storm water debris interceptor where Buckthorn Wash bisects the Silver Lakes Golf Course. Approx. size (LWD): 60' x 10' x 6'		Complete using local funding
93	Lahontan	Apple Valley & Hesperia Subregional Water Reclamation Facilities	Victor Valley Wastewater Reclamation Authority	Logan Olds	Two scalping facilities that will treat liquids from existing collection system and reuse for irrigation purposes. Once complete, each facility will be able to process up to 1 million gallons per day (MGD) with the opportunity to expand each to 4 MGD.	2004 RWMP (VVWRA Subregional Wastewater Treatment Plants).	Project Complete
130	Lahontan	Sewer Lift Station Nos. 1 and 3 Improvements	Running Springs Water District	Ryan Gross, 909-867-2766, rgross@runningspringswd.com	The Running Springs Water District's Sewer Lift Station Nos. 1 and 3 are more than 40 years old and in need of significant improvements to increase reliability and reduce the potential for sanitary sewer overflows into the Deep Creek watershed. The improved reliability to these critical sewer lift stations will increase the water quality impacts to the headwaters of the Mojave watershed.	Or could potentially integrate with 1003	Project Complete
1005	Lahontan	Regional Demonstration Garden Program - Multiple locations	Mojave Water Agency, Newberry Springs Community Services District (CSD), City of Victorville	Christy Huiner, Linda DeLuca-Snively	Construction of a variety of demonstration gardens to engage and educate visitors and communities in solutions for creating beautiful and environmentally smart landscapes. Design would include development aimed at local biomes, taking in climate and soil types, and the need to demonstrate gardening, smart agriculture, irrigation infrastructure, etc. These gardens would be similarly improved in regards to education and information availability, for example, signage, information kiosks, educational material, and QR readers. Integrates Projects 5, 23, 33, and 123.	Integrates Projects 5, 23, 33, and 123.	Completed Project
1006	Colorado	Capital Water Main Replacement Program	Hi-Desert Water District	Ed Muzik	This project would include the replacement of 46,940 lineal feet of old; undersized steel water mains with that of PVC constructed water mains. During installation, new, properly spaced isolation valves and fire hydrants would also be installed along with service lines. Construction of this infrastructure would be in various areas within the Town of Yucca Valley. Integrates Projects 87-91.	Integrates Projects 87-91.	Project Complete

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
19	Individual or Small System Improvements	Lahontan	Conceptual Planning for Hinkley's Community Drinking Water System	MWA/Lahanton Regional Water Quality Control Board (RWQCB) /Department of Public Health (DPH) grant	Lester Steven White	Evaluate the concept of a community water system that draws water from a source of water that is not affected by the chromium plume. The water source must not be affected by plume expansion, remedial byproducts, or groundwater drawdown for the lifetime of the source and must be able to meet the water quality requirements.	Hinkley Water Supply Augmentation - 2004 Regional Water Management Plan - MWA	INACTIVE	Conceptual
35	Flood Management	Colorado	Indian Cove Stormwater Capture and Recharge Project	Twentynine Palms Water District/Joshua Basin Water District	Ray Kolisz	The Department of Water Resources has identified the safe yield for the Indian Cove groundwater basin, limiting production to 1,500 acre-feet per year to avoid overdraft. This project could mitigate past over-drafting and prevent future declines in water levels within this shared basin.		INACTIVE	Conceptual
62R	Baja / Ag Issues	Lahontan	Water Conservation Ordinance	County of San Bernardino	Jim and Ellen Johnson	A water conservation ordinance in the unincororated areas of San Bernardino County, within the MWA Jurisdictional Boundary. The MWA has said that the Judgment alone may not be adequate to address all of the water conservation measures that need to be taken to balance water supply and demands in the Baja Subarea. At the Silver Valley Farm Bureau meeting stakeholders were approached about singing into the stipulated agreement. At that time County Ordinance 810.0605-810.0610 was referred to, to be our protection against unauthorized production. This ordinance was removed in 2007. A new ordinance could help to insure an equitable share of the benefits made possible by the Physical Solution.		INACTIVE	Implementable
66R	Water Supply / Recharge	Lahontan	State Water Project Water Treatment Plant in conjunction with R3 project	Mojave Water Agency	Darrell Reynolds	Construct a Water treatment plant to treat State Water Project Water and deliver directly into the potable R3 water delivery system. This can be done instead of pumping groundwater wells.		INACTIVE	Conceptual

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
73	Wastewater / Recycled Water	Colorado	Twentynine Palms Groundwater Protection Plan Septic System Management Element (SSME)	Twentynine Palms Water District/City of Twentynine Palms	Ray Kolisz	The Regional Water Quality Control Board (Colorado Region) has adopted a septic rule in order to comply with the State Recycled Water Policy. In order to protect the groundwater quality within Twentynine Palms, the Groundwater Protection Plan has identified a Septic System Management Program for monitoring and maintenance of the community's only supply of water, groundwater. Indoor conservation and the reduction of outflow to septic systems will be a significant focus of the septic maintenance and informational outreach goals.		INACTIVE	Implementable Program
82	Water Supply / Recharge	Lahontan	Wrightwood Imported Water Project	Golden State Water Co - Wrightwood	Perry Dahlstrom	Install a well near Desert Front Road, including a pump station and transmission main to import water from the lower elevations south of the town into the higher elevations in the north. Includes study, design and facilities.		Per Perry: Project needs to be removed. CPUC did not approve.	Study, Design, Construction
105	Wastewater / Recycled Water		Wrightwood Sewer Plan	MWA/Lahanton RWQCB/DPH grant	Lynn Crawford	The project is to develop a sewer plan for the Wrightwood Community.		Per Perry: Project formed a CSD , Non-DAC, Lahontan lowered the Nitrates requireents	Conceptual
1002	Judgment/Water Rights Issues	Both	Evaluate and consider potential modifications to the Judgment for the Baja Subarea	Mojave Water Agency	Jim and Ellen Johnson, Walt Brock, Dean VanBastelaar	General Project Concept is to combine projects submitted in the IRWM Planning process regarding policy issues relating to the Mojave Basin Area judgment. Integrates Projects 2, 11R, 20R, 46R, 67R, 76R and 104.	Integrates Projects 2, 11R, 20R, 46R, 67R, 76R, and 104.	INACTIVE	Conceptual

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Project No.	Project Category	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1004	Baja / Ag Issues	Lahontan	Baja Sustainability Initiative #1 (Agricultural Water Conservation and Base Annual Production Right (BAP) Acquisition Program)	Mojave Water Agency	Curt James	This Agricultural Water Conservation program will be accomplished through several different means. It includes components of a Voluntary program funded entirely from local, state, federal and/or water fee dollars that purchase base annual production rights (BAP) from stipulated parties under the Mojave Basin Area Judgment. All BAP will be purchased by the Mojave Water Agency and be permanently retired. Each producer's percentage share of BAP will determine the eligible amount of BAP that can be sold to MWA. Also, a Crop Conversion program that would incentivize converting from water intensive crops like Alfalfa to other water efficient crops, with the ultimate goal of reducing costs to the point of making direct delivery of SWP viable and economically feasible. Integrates Projects 1, 10, 25, 55R, and 70R.	Integrates Projects 1, 10, 25, 55R, and 70R.	INACTIVE	Implementable Program
1007	Baja / Ag Issues	Lahontan	Baja Sustainability Initiative #2 (Baja Major Storm Diversion Network)	Mojave Water Agency	Curt James	A major storm event diversion network to capture storm flows and transfer them to retention ponds that could then be disbursed on the south side of the valley to help facilitate recharge and recovery in areas that are unable to receive any natural benefit from storm flows that run down the river. A reduction in the velocity of the storm flows could also greatly assist in the prevention of scouring Cady Riparian Habitat. This would also include investigation into the possible utilization of pit at Kewitt, possible installation of weirs and irrigation channels to divert flood waters to percolation ponds, injection wells. Integrates Projects 8, 9, 43, 47, and 75.	Integrates Projects 8, 9, 43, 47, and 75.	INACTIVE	Conceptual
1009	Baja / Ag Issues	Lahontan	Baja Sustainability Initiative #3 (Channel Dredging, Flood Control, Riparian Protection and Vegetation Removal)	Mojave Desert Resource Conservation District (MDRCD)	Baja / Ag Issues	Lahontan	Baja Sustainability Initiative #3 (Channel Dredging, Flood Control, Riparian Protection and Vegetation Removal)	INACTIVE	Baja / Ag Issues

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1001	Lahontan	Sewer Lift Station or Reverse Osmosis Treatment Plant	City of Victorville	Steve Ashton	The lift station is preferred over the RO plant due to the ongoing operational and maintenance costs associated with RO. The RO project could integrate with other recycled water projects in the region, such as with the City of Adelanto; however, VSD 4 lift station is preferred over this project due to the ongoing operational and maintenance costs associated with reverse osmosis. Integrates Projects 17 and 61. **From Steve Ashton on 4/30/2018: Good afternoon Matt,** **Sorry for the late response. Regarding the RO/Lift Station project – we have settled on RO. Because hauling away RO brine is to cost prohibitive in the desert, we are first looking at sites and sizes for evaporation ponds. There are many things in play regarding this project, such as a possible partnership with the HDPP to dispose their brine in RO evap ponds rather than remaining a Zero-discharge facility. This would, of course, effect the sizing of the ponds. I wish I had more information to give you on this project, but there are a lot of unknowns at this time.**	Integrates Projects 17 and 61.	(currently evaluating site and costs for evaporation ponds); RO treatment facility not yet known – Evaporation pond costs estimated between 5,800,000 and 6,100,000 depending on amount of earthwork and pipeline needed. Project Update: have settled on RO installation rather than VSD 4 Lift Station.	Conceptual; Implementable

Integrated project above with specific projects details listed below

17	Lahontan	City of Victorville VSD 4 Sewer Lift Station	City of Victorville	Steve Ashton	COV VSD 4 Lift Station will divert the remainder of the Federal Bureau of Prisons wastewater flow to the City's WWTP and blend the TDS from the WWTP's industrial wastewater flow down to a limit that will allow the sale of Title 22 recycled water for cooling purposes to the High Desert Power Project and a future second power plant in the area.			Design
61	Lahontan	Reverse Osmosis Package Treatment Plant	City of Victorville	Steve Ashton	A small package reverse osmosis treatment plant with a capacity of approximately 300 gpm would lower the City of Victorville's IWWTP effluent TDS from the current 600 - 800 mg/L down to 450 mg/L. This removal of TDS would increase reuse of the Title 22 recycled water plant effluent.			Conceptual

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1003	Both	Assistance Program for Small Drinking Water Systems	Mojave Water Agency, San Bernardino County Environmental Health Services	Matthew Howard and Joy Chakma	Program would identify water supply, water quality and infrastructure needs of small drinking water systems within the IRWM Region. Small systems needs may include but not limited to: Water quality treatment systems, fireflow protection, replacing aging infrastructure, install new infrastructure, interconnection with other purveyors, well drilling, scada systems, feasibility studies, etc. This program would help connect small systems to available funding by identifying funding sources, assisting with grant applications and paperwork, etc. Sources of funding could include State and Federal funds from a variety of programs designed to help small systems in the identified challenges listed. Integrates Projects 6, 7, 15, 44, 45R 52, 69, 80, 83, 84, 85, 100, and 120.	Integrates Projects 6, 7, 15, 44, 45R, 52, 69, 80, 83, 84, 85, 100, and 120.		Ongoing/In-Progress

Integrated project above with specific projects details listed below

6	Lahontan	Arsenic and Metering Project	Bar-Len Mutual Water Company		The project aims to address arsenic violations from the S.B. County Health Department, and to install water meters at residences to encourage water conservation and a usage-based billing formula. The water company has 45 customers.		Recent Prop. 1/SRF Planning grant awarded	In-Progress
7	Both	Assistance Program for Small Drinking Water Systems	Mojave Water Agency	Matthew Howard	Program would identify water supply, water quality and infrastructure needs of small drinking water systems within the IRWM Region and help connect them to available funding by identifying funding sources, assisting with grant applications and paperwork, etc. Sources of funding could include State and Federal funds from a variety of programs designed to help small systems.			Ongoing/In-Progress
15	Colorado	Center Water Company Wells, Infrastructure & Storage Project	Center Water Company		The company's system is divided into two parts as previously described. The west side currently has a dead end mainline coming from the leased wells on the east side of the flood channel to Highland Road, south on Highland to Furst St then west on Furst to a dead end. This side of the system would include a new well on Highway 18 then create a system loop from the new well south on Red Butte Ave to Furst St then east on Furst to tie into the existing dead end line. Also, from the new well site a new pipeline would run east along the highway to Highland Road, then north on Highland to point of connection with the existing mainline. The company proposes to use the two 10,000 gallon storage tanks at this new ell site.		Recent Prop. 1/SRF Planning grant awarded	Conceptual Implementable Program
44	Colorado	Lucerne Valley Small Water Systems Feasibility Study	Lucerne Valley Small Water Systems Feasibility Study	LVEDA	Prepare a feasibility study to explore the consolidation of the ten mutual water companies, local school district, CDA 29 & Hitchin Lucerne Inc retail commercial property. This would be a two phase study addressing 1) managerial & resources consolidation & 2) physical infrastructure tie-in consolidation			Feasibility Study
45	Colorado	Mesa Tank #4, Well #5, Well Generators, Booster Station Generator, etc.	Apple Valley Heights County Water District		District want to investigate avenues for fire protection, adequate water storage, energy costs, power loss protection.		Planning grant awarded, ongoing assistance	Implementable/in progress
52	Lahontan	New Well - Kiowa Well No. 1	Golden State Water Co - Apple Vly South		Permit, design, drill, construct, and equip a municipal water supply well on an existing property in the Apple Valley South system.			Implementable Project

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
69	Colorado	Supervisory Control and Data Acquisition (SCADA) System for Operations and Security	Bighorn-Desert View Water Agency		Design and Install SCADA system to automate the acquisition of data and provide centralized control of well pumps, reservoirs, booster stations, flow meters and security monitoring (intrusion monitoring) of the water system. Project would include evaluation of various SCADA products and communication protocols.			Conceptual
80	Both	Wellhead Treatment - Uranium	Mojave Water Agency		Wellhead treatment for groundwater sources with elevated radionuclides (Gross Alpha, Uranium). Project components include studies to determine treatment methods available and specific to systems with no access to sanitary sewer for reject waste streams, cost/benefit analysis of methodologies, cost analysis of operation/maintenance of systems and capital construction costs. Could include research of new treatment methodologies to meet challenges associated with rural areas (low overall production, lack of sanitary sewer for reject water (brine) disposal).			Conceptual/Possibly Complete
83	Lahontan	Yermo CSD - Upgrade Water Comp (?)	Mojave Water Agency		Review existing water systems, plan new system, prepare construction plans			Inactive project as Liberty Utilities purchased Yermo CSD water system
84	Lahontan	Yermo Hellbro	Mojave Water Agency		Replace Yermo Hellbro water tank. It is leaking. Multiple repairs no longer repairable. Only storage tank on part of system.		Project described as implementable, but no info on costs or status. Need program preferences.	Inactive project as Liberty Utilities purchased Yermo CSD water system
85	Lahontan	Yermo Marine Two	Mojave Water Agency		Replace Marine Two water storage tank. It is leaking & cannot be repaired. This is the only backup for the Marine One.		Project described as implementable, but no info on costs or status. Need program preferences.	Inactive project as Liberty Utilities purchased Yermo CSD water system
100	Lahontan	Thunderbird CWD Fluoride/Nitrate Treatment Plant	Mojave Water Agency		Evaluate and install a Fluoride/Nitrate treatment system including one groung water well, high elevation storage tank and pipeline.			Conceptual
120	Colorado	Bighorn-Desert View Water Agency Infrastructure, Emergency Preparedness and Storage Projects	Bighorn-Desert View Water Agency	Marina West	The Agency's water system would benefit from the following improvements some of which have been identified by CA Dept. of Public Health as sanitary or operational deficiencies. Upgrades include: generator connectors and portable generators for wells and booster stations, Sanitary upgrades at one well in Flamingo Heights, Increased reservoir storage at Well 10 hauling station, "A" Booster station reconfiguration and upgrade, system-wide leak detection, flow meter bench test upgrades, intertie with HDWD for emergency service, fire hydrant upgrades (outside of Project No. 74), protection of water pipelines that cross vunerable washes (e.g. bury crossings deeper, encasements or concrete swales at ground level across washes, well rehabilitation, pump and motor upgrades for energy efficiency, solar power for energy efficiency.			Conceptual and Implementable

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1008	Lahontan	R-Cubed Enhanced Purveyor Supply System	Mojave Water Agency	Perry Dahlstrom and Jesse Flores	Design and install conveyance from R-Cubed to purveyors not currently connected to R-Cubed. This may be through direct conveyance or via interconnections with purveyors currently receiving R-Cubed water to "wheel" water to purveyors adjacent to their systems. The project includes study, design and facilities. Integrates Projects 37, 96, 124.	Integrates Projects 37, 96, 124.	Conceptual Design in progress	Design In-progress/In-Progress

Integrated project above with specific projects details listed below

37	Lahontan	Interconnection with Apple Valley Ranchos Water Company	Golden State Water Co - Apple Vly South		Install an interconnection with Apple Valley Ranchos Water Company to provide additional supply. The intended purpose is to participate in the Mojave Water Agency's Regional Recharge and Recovery Project (R-Cubed). The project includes study, design and facilities.		Need statewide priorities, program preferences or RMS.	Study, design, facilities
96	Lahontan	Adelanto R-Cubed Connection	City of Adelanto	Raymond Cordero	Expand the existing R-Cubed project to allow for a direct turnout connection for the City of Adelanto		BOR Grant Award; Design In-Progress	In-Progress
124	Lahontan	Pipeline Interconnection - Apple Valley North and Apple Valley South Water	Golden State Water Co - Apple Vly North		The project involves routing analysis, design, permitting and construction of approximately 20,000 feet of main and a booster station.			The project includes study, design and facilities.

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1010	Colorado	JBWD CUWCC Compliance Project	Joshua Basin Water District	Curt Sauer - csauer@jbwd.com - 760-974-0049 ext. 226	Urban water management planning requires planning, design and implementation of a variety of best management practices for the purposes of increasing conservation, educating the community on water issues, and reducing wasteful water practices. A large component of the proposed project is a system-wide leak detection program. Integrates Projects 39 and 99.	Integrates Projects 39 and 99.		Conceptual

Integrated project above with specific projects details listed below

39	Colorado	JBWD CUWCC Compliance Project - Leak Detection	Joshua Basin Water District		System-wide leak detection program to identify and eliminate potential water system leaks, thereby reducing water loss and conserving the regions available water supplies.		CRWA just finished a large Leak Detection effort in the area.	Planning, Design and Implementation of District-wide Leak Detection Program per CUWCC policies.
99	Colorado	JBWD CUWCC Compliance Project	Joshua Basin Water District		Urban water management planning requires planning, design and implementation of a variety of best management			Implementation Program

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1011	Lahontan	Antelope Valley Wash / Ranchero Basin Recharge Ponds	City of Hesperia, MWA, SBC Flood Control	Tony Winkel and Tom Thornton	The Ponds would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 65 acre site for a storm water detention basin in the Antelope Valley Wash south of the newly constructed Ranchero Road. In addition to storm water detention, the site would be able to accommodate groundwater recharge. Integrates Projects 4 and 109.	Integrates Projects 4 and 109.	In Progress	Conceptual Design

Integrated project above with specific projects details listed below

4	Lahontan	Antelope Valley Wash Detention/Recharge Ponds	City of Hesperia/Mojave Water Agency		The Ponds would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 65 acre site for a storm water detention basin in the Antelope Valley Wash south of the newly constructed Ranchero Road. In addition to storm water detention, the site would be able to accommodate groundwater recharge./The SBCFCD has stormwater detention basins planned on Antelope Wash. These basin can also be			Conceptual Design
109	Lahontan	Ranchero Basin (known as Antelope Valley Wash recharge ponds in the Mojave Water Agency's 2004 Integrated Regional Water Management Plan).	San Bernardino County Flood Control District (SBCFCD) and County of San Bernardino/City of Hesperia/MWA		The basin will intercept and detain flows from its tributary watersheds and subsequently convey flows at a reduced rate. The project will include an embankment (max height of 27'), a spillway, an outlet struictures, access roads around the basin and access ramps to the basin floor.			Construction of a dention/recharge basin

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1012	Lahontan	Cedar Street / Bandicoot Detention Basin	City of Hesperia, MWA	Tom Thornton	The Basin would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 120 acre site for a storm water detention basin at the east end of Cedar Street and southwesterly of the California Aqueduct. In addition to storm water detention, the site would be able to accommodate groundwater recharge. Integrates Projects 14 and 107.	Integrates Projects 14 and 107.		Conceptual Design

Integrated project above with specific projects details listed below

14	Lahontan	Cedar Street Detention/Recharge Basin	City of Hesperia/Mojave Water Agency		The Basin would provide groundwater recharge upgradient from Hesperia Water District wells. The Hesperia Master Plan of Drainage identifies a 120 acre site for a storm water detention basin at the east end of Cedar Street and southwesterly of the California Aqueduct. In addition to storm water detention, the site would be able to accommodate groundwater recharge./The SBCFCD has stormwater detention basins planned in Cedar Street. These basin can also be conjunctively used for groundwater recharge.			Conceptual Design
107	Lahontan	Bandicoot Basin (known as Cedar Street detention basin in the Mojave Water Agency's 2004 Integrated Regional Water Management Plan).	San Bernardino County Flood Control District (SBCFCD) and City of Hesperia/MWA		The design of the proposed basin will include multiple features such as: inlet and outlet structures; channels and/or closed conduits; transition structures; headwalls and wingwalls, and basin embankments. Additionally, access roadways along tops of the embankments and around the basin, and access ramps to the basin floor			In-Design

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1013	Both	Baja Sustainability Initiative #4 (Well Assistance Program)	Baja Sub-Advisory Committee	Matt Howard	Financial assistance program to provide low interest loans and grants to help low income individuals finance the costs for construction, refurbishment or service of their individual household water wells. May also include requests for financial assistance for SPW from Mojave River Pipeline. Integrates Projects 26 and 81R.	Integrates Projects 26 and 81R.	In Progress, 500k SWRCB	In-Progress

Grouped project above with specific integrated projects details listed below

26	Lahontan	Domestic Water Well System Assistance Program	Baja Sub-Advisory Committee		Financial assistance program to provide low interest loans and grants to help low income individuals finance the costs for construction, refurbishment or service of their individual household water wells.			Conceptual
81R	Both	Wells/declining water levels	Mojave Water Agency		Need a quality of water for the many that cannot afford to replace a well on their own wells will start pumping mud when the depth of the well is no longer efficient for the water table			Conceptual

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
1014	Both	Water University	Mojave Water Agency, Alliance for Water Awareness and Conservation, JBWD	Nicholas Schneider	The Water University Program is a comprehensive educational and outreach program targeting teachers, real estate professionals, the business community, as well as the general public. This four-component program would offer curriculum for teachers to use in their classrooms for use in science and social studies classes. The second education component targets Fire Departments with education materials and presentations for greater water efficiencies. The third component targets businesses and the real estate community with water conservation information including native landscaping tips, and free water savings devices for the home including sprinkler nozzles, shower heads, etc. The fourth component targets irrigation supervisors and contractors by offering a certificate program in water efficiency. This component would include regular workshops and education materials. The final component is aimed at homeowners to better educate them on water conservation. Integrates Projects 30, 78, and 79.	Integrates Projects 30, 78, and 79.	In Progress, need more details for NS. High Desert Water Summit, Colorado Region Water Education	Ongoing

Integrated project above with specific projects details listed below

30	Lahontan	Groundwater Education Program	Baja Sub-Advisory Committee		To provide guidance and further knowledge about water through education and outreach. To develop a consumer guide on groundwater, well construction, etc. in the Mojave Basin. (To provide literature about groundwater, wells, well construction, water systems, maintenance, record keeping, conservation and a list of licensed well contractors so that consumers can make an informed decisions).			Conceptual
78	Both	Water University	Alliance for Water Awareness and Conservation		The Water University Program is a comprehensive educational and outreach program targeting teachers, real estate professionals, the business community, as well as the general public. This four-component program would offer curriculum for teachers to use in their classrooms for use in science and social studies classes. The second education component targets Fire Departments with education materials and presentations for greater water efficiencies. The third component targets businesses and the real estate community with water conservation information including native landscaping tips, and free water savings devices for the home including sprinkler nozzles, shower heads, etc. The fourth component targets irrigation supervisors and contractors by offering a certificate program in water efficiency. This component would include regular workshops and education materials. The final component is aimed at homeowners to better educate them on water conservation. This component includes an Annual Water Expo with demonstrations, information, workshops, and free giveaways including moisture meters, nozzles, showerheads, etc.	Need Water Use Efficiency Strategic Plan or Water Conservation Plan data to determine how much water would be saved.		Implementable program
79	Both	Watershed Educational Awareness Project	Mojave Water Agency		This project uses educational and public outreach materials including yearly surveys to encourage a conservation ethic based on basin-wide understanding of the role and value of water and the effects of personal actions on supply and demand. The project encompasses (but is not limited to) materials, teacher training, classroom visits and student and community activities related to water wise gardening, invasive plants, sheet flow (erosion from poor flood control management or removal of native vegetation), septic systems, many behavioral choices, recharge opportunity/necessity, and how the safety and quality of tap water is maintained.			Conceptual

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1015	Both	SB County Integrated Flood Projects	SB County Flood Control District	Michael Fam	Flood projects throughout the Region all completed by SB County Flood Control District. Integrates Projects 108-114.	Integrates Projects 108, 110-114.	Michael Fam mfam@dpw.sbcounty.gov 909 387-8124	Conceptual and Design
					Integrated project above with specific projects details listed below			
108	Lahontan	Oak Hills Basin / Hesperia Basin 2	San Bernardino County Flood Control District		The design of the proposed basin will include multiple features such as: inlet and outlet structures; channels and/or closed conduits; transition structures; headwalls and wingwalls, and basin embankments. Additionally, access roadways along tops of the embankments and around the basin, and access ramps to the basin floor			Design and Construction
110	Lahontan	Tussing - Juniper Basin	San Bernardino County Flood Control District		Tussing-Juniper Basin is a regional detention facility in accordance with the Apple Valley Master Plan of Drainage. It is located in the Town of Apple Valley area.			Design and Construction
111	Colorado	Donnell Basin	San Bernardino County Flood Control District		Donnell Basin is a regional detention facility in accordance with the Twentynine Palms Master Plan of Drainage. The project will include the re-construction of existing inlet and outlet channels, basin embankments, basin outlets - emergency spillway and Reinforced Concrete Box (RCB), construction of drainage inlets, access roads 20 feet wide on top of embankments and around the basin, and access ramps 20 feet wide.			Design and Construction
112	Lahontan	Seneca/Bus Barn Basin	San Bernardino County Flood Control District		Seneca/Bus Barn Basin was identified in the Victorville Master Plan of Drainage (MPD) as a priority facility for flood protection, water quality and water conservation for the High Desert area. The Basin will be earthen bottom and will include inlet, outlet and transition structures, channels and/or closed conduits, transition structures, wingwalls, headwalls, cut-off walls, basin embankments, emergency spillway, access roadways along tops of the embankments and around the basins and access ramps to the basin floor.			Design and Construction
113	Lahontan	Mesa Linda Basin	San Bernardino County Flood Control District		Mesa Linda Basin was identified in the Victorville Master Plan of Drainage (MPD) as a priority facility for flood protection, water quality and water conservation for the High Desert area. The Basin will be earthen bottom and will include inlet, outlet and transition structures, channels and/or closed conduits, transition structures, wingwalls, headwalls, cut-off walls, basin embankments, emergency spillway, access roadways along tops of the embankments and around the basins and access ramps to the basin floor.			Design and Construction

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Project No.	Funding Area	Project Title	Lead Agency/ Organization	Contact Person	Project Description	Comments/ Review Questions	Updated Info	Project Type
114	Lahontan	Amethyst Basin / Oro Grande Wash	San Bernardino County Flood Control District		Amethyst Basin is located in the City of Victorville entirely within the Oro Grande Wash. The proposed basin and emergency spillway are designed to meet 100-year and 1000-year flows respectively per District standards. The Basin will be earthen bottom and will include inlet, outlet and transition structures, channels and/or closed conduits, transition structures, wingwalls, headwalls, cut-off walls, basin embankments, emergency spillway, access roadways along tops of the embankments and around the basins and access ramps to the basin floor.			Design and Construction