

Greater Monterey County Integrated Regional Water Management Plan: 2022 Concept Proposals

Project Proponent	Project Title	Description
Central Coast Wetlands Group	Salinas to The Sea Storm Water Management, Community Development and Habitat Enhancement Project	The Salinas Valley/Gabilan Watershed drainage system was originally designed in 1906 as a stormwater flood control system that reclaimed land for farming and urban development, to the detriment of environmental considerations. Today this historical management strategy is in direct contradiction with environmental laws and policies leading to legal challenges and regulatory actions. We have developed an alternative vision for how the current Rec Ditch/ Gabilan Watershed drainage system is managed that will increase flow capacity while also enhancing wetland habitat and water quality by creating a linear restoration project along the Reclamation Ditch between the City of Salinas and Moss Landing Beach (Salinas to the Sea). The project will help the County and farmers meet their water quality obligations in a cost-effective way. This enhanced drainage system will support flood control and environmental goals while also providing a recreational opportunity to north Monterey County residents who often feel isolated from their coast.
City of Salinas	Acosta Plaza Urban Drainage Restoration	Cost effective distributed restoration of the Acosta Plaza urban drainage. Every waterway to which the City of Salinas MS4 drains is listed on the EPA 303(d) list, including the Salinas Reclamation Canal to which Acosta Plaza drains. Acosta Plaza is a high-density low-income residential neighborhood that is 98% economically disadvantaged. There are 3 schools within the drainage. The use of the 2Nform monitoring and modelling indicates Acosta Plaza is a high priority opportunity within the City to reduce excess stormwater volumes, urban pollutant loads and trash delivery to the local receiving waters. The drainage restoration will integrate cost-effective structural and non-structural BMPs intensively at scale that include but not limited to: • More effective street sweeping with parking controls, efficient sweepers, coordination with waste recovery, community outreach and education, community litter clean ups, improved road pavement integrity and design and other elements to increase the effectiveness of City land maintenance efforts. • Neighborhood, businesses and school education, outreach and incentives to reduce local litter. Downtown Street Team litter clean-up sites. • Design implementation and maintenance of extensive distributed decentralized structural BMPs, green infrastructure, green streets and parcel runoff control structures and practices. • Design implementation and maintenance of centralized structural BMPs. Field data will serve as data inputs to quantify the volume, pollutant and litter reduction progress achieved, among other multi-benefits.
City of Salinas	Lincoln Avenue Green/Complete Street	Completion of design/construction of a green/complete street for an approximate 1/3 mile length of Lincoln Street, Salinas, between Alisal and Market Streets. The project design will include multiple community, water resource and other environmental benefits. The concept design, initial sizing, initial quantified performance and cost have been completed. The project will be integrated with the City's Regional Surface Transportation Program grant for Complete Streets and includes retrofit of the existing street condition to integrate green infrastructure elements such as bioretention/biofiltration and permeable pavement.
Monterey County Water Resources Agency	Dedicated Monitoring Well Expansion (Coastal)	Dedicated monitoring wells are proposed for installation in the Coastal Salinas Valley in the area of known seawater intrusion based on MCWRA annual groundwater quality and level monitoring and semiannual generation of the 500 mg/L seawater intrusion fronts and groundwater level contours.

Monterey County Water Resources Agency	Dedicated Monitoring Well Expansion	This project proposes expansion of the current Dedicated Monitoring Well Program (DMW) within the Salinas Valley Ground Water Basin (Basin). The current DMW program consists of 35 wells located through-out the Basin but does not provide enough coverage for a robust data analysis and extrapolation. The goal is to fill water quality and water level data gaps throughout the entire Basin and to provide sufficient data to complete a robust analysis and extrapolation to the remaining areas of the Basin and the subareas.
Monterey County Water Resources Agency	Ground Water Conservation and Extraction Monitoring Expansion Project	This Project will fund the expansion of the Ground Water Conservation and Extraction Program (GWCE) within MCWRA Zone 2C. The Monterey County Water Resources Agency (MCWRA) maintains a GWCE that provides critical data about water conservation practices and ground water extractions (withdrawals) in Zones of Benefit. "Zones of Benefit" are geographic areas that receive hydrologic benefit from managed conservation releases from the dams at the Nacimiento and San Antonio reservoirs. The current GWCE Program has operated successfully within the boundaries of Zones 2, 2A, and 2B since 1993.
Monterey County Water Resources Agency	Nacimiento Dam Hydroelectric Plant Upgrade	The Nacimiento Dam Hydroelectric Plant currently generates power via two hydroelectric generators commonly referred to as unit No.1 and unit No.2. Operation of these two units is dependent upon reservoir release rates and reservoir elevations. Unit No.1 is a horizontal Francis turbine capable of generating a rated output of 4,066kW with an operational flow range of 150-460 cfs. Unit No.2 is a low-flow TKW vertical turbine capable of generating a rated output of 340 kW with a stationary operational flow of 25 cfs at or above elevation 728 ft. The aforementioned hydroelectric plant constructed in 1987 is situated downstream of Nacimiento Dam adjacent to the dam's southern abutment. In 2010, the Monterey County Water Resources Agency (MCWRA) completed the construction of the Salinas Valley Water Project which changed the low-flow release schedule at Nacimiento Dam from 25 cfs to 60 cfs. Unit No.2 cannot generate power at flows greater than 25 cfs and Unit No. 1 cannot generate power below 150 cfs. Therefore, full hydroelectric power generation cannot be achieved for many months each year with a power production efficiency reduction of approximately 58% and loss of revenue. The proposal includes replacing Unit No.2 with a variable flow turbine to allow for an expanded operational range of hydro-power generation. Installation of the new turbine, generator, piping and other appurtenances shall require modifications to the power plant's existing structure. This will result in an increase of revenues and provide for additional green energy in the regional area.
Monterey County Water Resources Agency	Reclamation Ditch Improvement Plan Advisory Committee	After experiencing damages from flooding and erosion along the Reclamation Ditch during the winters of 1995 and 1997, the Agency contracted with engineers to analyze the operation of the drainage system and recommend improvements. In 1999 the Zone 9 and Reclamation Ditch Drainage System Operations Study (Operations Study) was completed which recommended system-wide improvements. An advisory committee reviewed the recommendations and considered alternatives regarding implementation, funding strategies, and gaining community support. The Reclamation Ditch Improvement Plan was developed by this advisory committee (RDIPAC) to address the flooding, erosion, and sediment issues impacting the Reclamation Ditch system, a 157-square mile watershed. The desired project types listed came from this process: replace Potrero Road Tide Gates; increase channel capacity and embankment stabilization at various locations; twelve bridge replacements; modify Main Street box culvert; increase pumping capacity at two pump stations; a comprehensive watershed assessment and management plan; and, a survey of existing rights-of-way. A feasibility analysis and prioritization needs to be completed. Proposal submitted here will implement recommendations by the RDIPAC.

Monterey County Water Resources Agency	MCWRA Reservoir Roads Assessment and Upgrade Project	The San Antonio and Nacimiento Reservoirs are the primary sources of water for the Salinas Valley groundwater basin. Protection of water quality in the reservoirs is critical to the mission of the Monterey County Water Resources Agency (Agency). Given the large number of road miles and their proximity to the reservoirs, pollution from road runoff may be a significant impact to reservoir water quality. However, no comprehensive assessment of roads around the reservoirs and their impacts has ever been conducted. This project will assess the water quality impacts of approximately 40 miles of unpaved roads that are located on land owned by the Agency and will create a plan to address these impacts. These roads drain directly or indirectly into either the San Antonio Reservoir in Monterey County or the Nacimiento Reservoir located in San Luis Obispo County. The majority of the land owned by the Agency around the reservoirs has historically been used for cattle grazing leases; many of these roads have delivered a significant amount of sediment into the reservoirs. The excess sediment impairs water quality and may be a means of carrying other pollutants such as mercury into these water bodies. This project will provide the planning and design elements for a future road upgrade implementation project, which will address adverse impacts of these roads. Specialists on the design and maintenance of ranch roads will survey every unpaved road segment on Agency land. Protocols to be used in this road assessment are being used throughout the state. These methodologies are provided in the California Department of Fish and Game's "California Salmonid Restoration Manual" and have been shown to protect water quality of neighboring streams by significantly reducing the force of road runoff and resulting in-stream sediment deposition. The authors of the road assessment and design section of that manual, Pacific Watershed Associates, will also provide training on those best management practices for road assessment and design as a part of this project. The use of standard protocols allows for a more accurate measure of effectiveness.
Monterey County Water Resources Agency	San Antonio Dam Hydro Electric Power Plant	Construct San Antonio Dam Hydro Electric Power Plant, producing "green" electrical energy.
Monterey County Water Resources Agency	San Antonio Dam Butterfly Valve Operator System Rehabilitation	San Antonio Dam has one outlet structure consisting of a submerged concrete intake structure, penstock, and downstream control house. Flows released from San Antonio reservoir are controlled via a dual valve control system. The submerged intake structure conveys water via an 84" penstock to a 96" butterfly valve that is located within a valve chamber. Water is then conveyed to an 84" Howell Bungler valve located beneath the control house. The 96" butterfly valve is the focus of this proposed rehabilitation. The associated butterfly valve is operated/exercised via its original hydraulic operator system which was installed in 1965. The butterfly valve and associated operator/control systems have been experiencing difficulty in effecting complete valve closure in a desired time period. Rehabilitation to the existing butterfly valve system would include installation of a new hydraulic operator system including hydraulic control panel, ram, latching system, and associated mechanical appurtenances. The new hydraulic operator system shall have the capability to operate/exercise the butterfly valve locally (in the valve chamber) as well as remotely (in the control house). Video surveillance cameras shall be installed to visually verify remote operations. All new operator remote controls shall be housed alongside the surveillance monitoring equipment within the existing downstream control house. Remotely augmenting the associated butterfly valve will not only increase operational flexibility, but will also provide an added layer of safety. This project is currently in its conceptual stage. Prior to implementation of the aforementioned rehabilitation, engineering/design will need to be conducted to determine all the appropriate project parameters.
Monterey County Water Resources Agency	MCWRA Solar Energy Project	The Monterey County Water Resources Agency Solar Project will consist of a solar energy field to offset energy needs of MCWRA water supply facilities.

Monterey County Water Resources Agency	Salinas River Diversion Facility Expansion	Due to the growing threat to the region's water supply and the gradual increase of seawater intrusion into groundwater aquifers of the northernmost portion of the Salinas Valley due to groundwater pumping, MCWRA developed the Castroville Seawater Intrusion Project (CSIP). This allows for the delivery of a blend of recycled (tertiary-treated) water and groundwater to agricultural fields within a 12,000-acre service highly affected by seawater intrusion since 1998. Since its implementation, the CSIP system has contributed to halting the recent rates of seawater intrusion in portions of the region and groundwater levels from three of the four aquifers affected are beginning to trend toward their historical levels. The results of the CSIP led to the next project to help slow and ultimately reverse seawater intrusion—the Salinas Valley Water Project (SVWP). Through the SVWP's installation of a rubber spillway gate at Nacimiento Dam and another rubber dam in 2010 on the Salinas River near Marina (the SRDF), seasonally stored river water can be pumped into the CSIP's pipelines for delivery as irrigation water, thus further reducing the need to pump groundwater. The 2015 and 2017 coastal Salinas Valley seawater intrusion contours continue to show the advancement of seawater intrusion into the Salinas Valley groundwater basin. The CSIP area is located within this Area of Impact where seawater intrusion is evident and in deep aquifers in the Salinas Valley Groundwater Basin. Due to the continued intrusion of seawater into the groundwater basin, new water sources, implementing efficiencies in the existing system, and expansion of the system are options to reduce the use of water from CSIP's supplemental wells. A feasibility study to develop the best alternatives for operating the system into the future conditions is desirable. Particular attention would be spent on how to utilize the existing water resources in a more efficient manner.
Monterey County Water Resources Agency	Salinas Valley Water Project Phase II	The Salinas Valley Water Project, Phase II will allow MCWRA to facilitate further offsets of groundwater pumping by delivering additional surface water to the Pressure and East Side subareas of the Salinas River Groundwater Basin. Up to 135,000 acre-feet per year of water will be diverted from the Salinas River and supplied for municipal, industrial, and/or agricultural uses in the Pressure and East Side subareas.
Monterey County Water Resources Agency	Potrero Road Tide Gates Construction Project	The Potrero Road Tide Gates lie within Monterey County in California's Central Coast Region, draining natural, storm water flows from its headwaters in the Gabilan Range down to its terminus at a set of tide gates at the entrance to Moss Landing Harbor. After experiencing damages from flooding and erosion along the Reclamation Ditch during the winters of 1995 and 1997, the Agency contracted with engineers to analyze the operation of the drainage system and recommend improvements. In May 1999 the Zone 9 and Reclamation Ditch Drainage System Operations Study (Operations Study) was completed, which recommended system-wide improvements with an estimated cost of \$57 million (1999 costs). The Board of Directors received the Study and formed a Reclamation Ditch Improvement Plan by the Reclamation Ditch Improvement Plan Advisory Committee (RDIPAC) which made recommendations for implementation, funding strategies, and gaining community support. The first project recommended is the Potrero Road Tide Gates. The RDIPAC provided input during the development of the Potrero Tide Gate Study which included the Potrero Road Tide Gates Project which will reduce the risk flooding in the City of Salinas and surrounding areas from current and future flow rates in the system, minimizing crop damage and reducing erosion and sedimentation from widened channel sections in the Reclamation Ditch watershed.

Resource Conservation District of Monterey County	Livestock and Land: Rangeland and Livestock Facility Water Quality, Vegetation Management and Wildlife Enhancement Program	The purpose of this program is to achieve immediate and lasting reductions in nutrient, sediment and pathogen pollution to surface and ground waters and enhance wildlife habitat through implementation of best management practices (BMPs) on livestock facilities and rangelands in the Greater Monterey County IRWM region. The proposed program utilizes an incentives-based approach to achieve the cultural change needed for livestock facilities to voluntarily adopt management measures that improve the healthy functioning of watersheds. Projects are implemented in high priority areas identified by the TMDLs and other regional and local plans. Water quality and wildlife goals will be achieved through implementation projects, project design, technical assistance, recruitment and training. We will employ a systematic evaluation process to measure program effectiveness through participant surveys, before and after site load reduction modeling and site-specific erosion and runoff assessments.
Resource Conservation District of Monterey County	Rural Roads Erosion Assistance Program for Monterey County	Inadequately constructed and maintained roads throughout Monterey County continue to add sediment to regional waterways, especially in areas of steep terrain and high rainfall such as the Big Sur Coast, which compromises stream habitat needed for federally-listed steelhead trout and other aquatic species. Roads have been identified as a significant source of sediment input into the streams and rivers draining to the Monterey Bay in the Water Quality Protection Program for the Monterey Bay National Marine Sanctuary Action Plan IV: Agriculture and Rural Lands along with other documents. RCDMC will serve as the program lead with regular guidance from a Rural Roads Technical Advisory Committee, in providing education and training on rural roads drainage techniques, on-site technical assistance, and funding for road erosion assessments, project design and permitting, and road drainage project implementation. The outreach aspects of the program will include demonstration workshops and trainings, outreach material development and public communications. The TAC will help to develop and review criteria to select road association projects that will receive funding as well as assess program success. Road association projects that are selected will require 50% of the project costs to be contributed by the road association. This match share will be from in-kind services and/or cash contributions.