

**GREATER MONTEREY COUNTY**  
**INTEGRATED REGIONAL WATER MANAGEMENT PROGRAM**  
APPLICATION FORM FOR IMPLEMENTATION PROJECTS AND CONCEPT PROPOSALS  
**2018/2019**

**GENERAL INSTRUCTIONS:**

Both implementation project proposals and concept proposals are being accepted at this time. Only implementation projects, however, will be eligible for IRWM Implementation Grant funds.

For concept proposals: If you would like to submit a concept proposal, you need only complete Section I of this application.

For implementation projects: There will be two rounds of Proposition 1 IRWM Implementation Grant solicitations (Round 1 in early 2019, Round 2 in 2020). If you are interested in having your project considered for Round 1 of the Prop 1 Implementation Grant round, you must complete all sections of this application. If you are not interested in having your project considered for Round 1, you need only complete Sections I and II.

For those interested in applying for Round 1: In addition to this application form, stakeholders who are interested in having their projects considered for Round 1 must also complete DWR's Project Information Form. The Project Information Form will be due on January 7, 2019. The form can be downloaded at:  
<http://www.greatermontereyirwmp.org/documents/solicitation/>

Both this form ("GMC Project Application Form") and DWR's form ("Project Information Form") should be submitted to: Susan Robinson, Greater Monterey County IRWM Program Director, srobinsons@frontier.com.

**THIS APPLICATION FORM IS DUE DECEMBER 3, 2018**

**THE PROJECT INFORMATION FORM IS DUE JANUARY 7, 2019**

**SECTION I. PROJECT SUMMARY AND IRWM OBJECTIVES**

**1. Project Proponent (Name of Organization Applying):** Monterey One Water/Central Coast Wetlands Group/City of Salinas

**2. Type of Entity:**

Local Public agency     Nonprofit organization     Public Utility     Mutual Water Company

Federally Recognized or State Indian Tribe

**3. Name and Title of Contact Person:** Ross Clark

**4. Phone:** 831-771-4411

**5. Email:** rclark@mml.calstate.edu

**6. Project Title:** Salinas Water Quality and Agricultural Reuse Efficiency Project

**7. Type of Proposal:** Is your project an implementation project (developed, with budget) or a concept proposal?

- Implementation project
- Concept proposal

**8. Project Summary:** Briefly describe your project (one paragraph):

The Salinas Water Quality and Agricultural Reuse Efficiency Project is proposed to occur at the **Salinas Industrial Wastewater Treatment Facility (IWTF)**, a treatment facility and its associated conveyance system that serves approximately 25 agricultural processing and related businesses, owned and operated by the City of Salinas. The IWTF is also the implementation site for the Salinas Storm Water (SSW) Projects, a partnership between the City and Monterey One Water funded through a Proposition 1 Storm Water Grant. The Storm Water Projects will augment and repurpose the IWTF to seasonally capture and store urban storm water and dry weather runoff for diversion to M1W Treatment Plant (TP) during summer months when recycled water demands are higher. The Project will include two distinct components:

1. **Passive Water Quality Enhancement Constraints Analyses and Pilot Study:** The initial treatment system will consist of a **treatment wetland chamber** (with enhanced linear flow) in series with **three phosphate removal chambers**.
2. **33-inch Abandoned-in-Place Pipeline Assessment and Rehabilitation:** During preliminary design of the SSW Projects, the **33-inch pipeline (abandoned-in-place)** was identified as an opportunity to utilize existing infrastructure to achieve energy savings if it could be used to **separately convey storm water to Pond 1 directly, bypassing the influent pump station and aeration basin**. Allowing storm water to bypass unnecessary aeration would result in an estimated **10% reduction in the overall energy consumption** of the IWTF.

**COST SUMMARY:**

Requested funds: \$805,000

Match: \$805,000

TOTAL: \$1,610,000

**9. Project Location:** Projects must be located within the Greater Monterey County IRWM region,<sup>1</sup> or otherwise be of direct benefit to the Greater Monterey County IRWM region. Where is your project located?

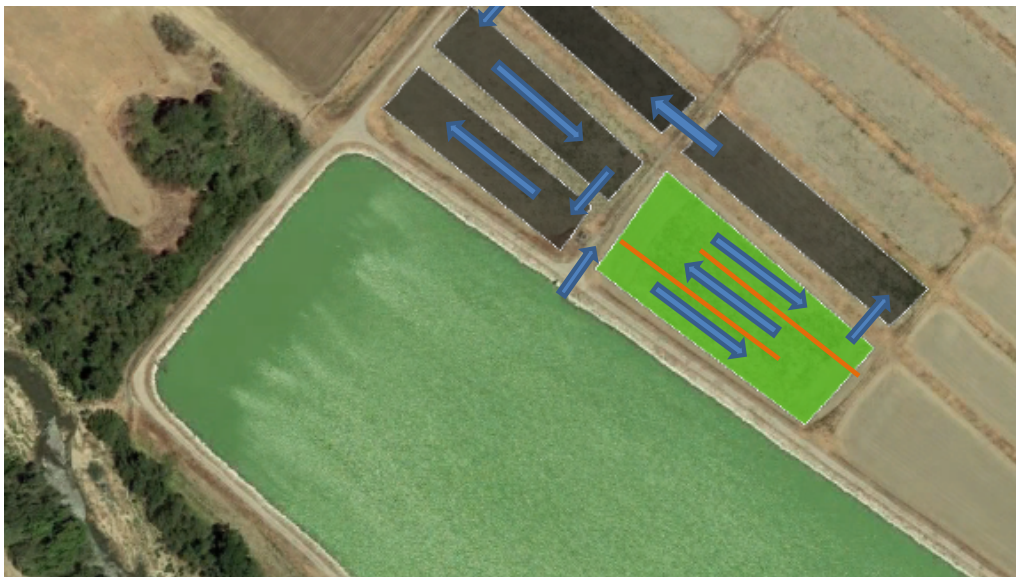
The Salinas Water Quality and Agricultural Reuse Efficiency Project will occur at the Salinas Industrial Wastewater Treatment Facility (IWTF), a treatment and conveyance system located on the east bank of the Salinas River north of Davis Road.

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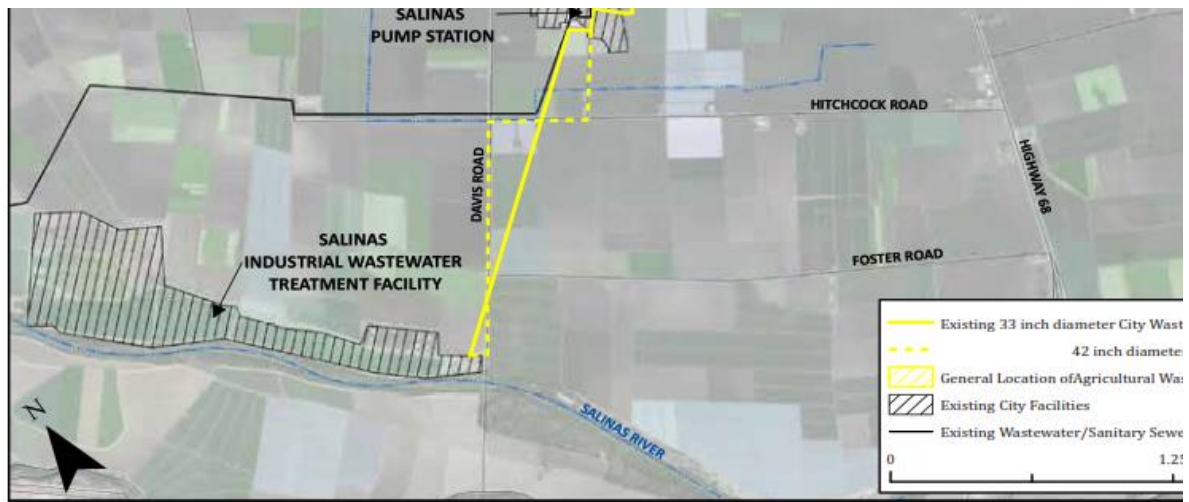
<sup>1</sup> The Greater Monterey County IRWM region includes most of Monterey County, with the exception of areas that are already included in other IRWMPs (specifically, the Pajaro River Watershed IRWM region and Monterey Peninsula, Carmel Bay, and South Monterey Bay IRWM region). These exceptions include: land areas within the San Jose Creek and Carmel River watersheds, land areas within the Pajaro River watershed, and most of the Monterey Peninsula (the Greater Monterey County region includes and runs north from Marina). For a map of the Greater Monterey County IRWM region, please go to: <http://www.greatermontereyirwmp.org/about/background/>.



Figure B. Concept Site Plan-Passive Water Quality Enhancement Pilot Study



Size of basin acres	depth	porosity	total water volume	HRT	Flow rate acft/day	number of ponds	gallons/day	percent of total flow	Nur hou
0.65	3	0.4	0.78	1	0.78	4	1,016,655	51%	3,7
0.65	3	0.4	0.78	2	0.39	4	508,328	25%	1,8
0.65	3	0.4	0.78	3	0.26	4	338,885	17%	1,2



**9. Project Cost Summary:** If project costs are known at this time, please summarize the the best of your knowledge). Note that Storm Water Implementation Grant projects receive State funding match of 50% of the total project costs.

	<b>\$ Amount</b>
Requested Grant Funds	\$805,000
Matching non-State Funds (1)	\$805,000

**10. IRWM Criteria**

To be eligible for inclusion in the IRWM Plan, projects must include one or more of the following elements. Please check all that apply:

- Water reuse and recycling for non-potable reuse and direct and indirect potable reuse
- Water-use efficiency and water conservation
- Local and regional surface and underground water storage, including groundwater aquifer cleanup or recharge projects
- Regional water conveyance facilities that improve integration of separate water systems
- Watershed protection, restoration, and management projects, including projects that reduce the risk of wildfire or improve water supply reliability
- Storm water resource management, including, but not limited to, the following:
  - Projects to reduce, manage, treat, or capture rainwater or storm water
  - Projects that provide multiple benefits such as water quality, water supply, flood control, or open space
  - Decision support tools that evaluate the benefits and costs of multi-benefit storm water projects
  - Projects to implement a storm water resource plan
- Conjunctive use of surface and groundwater storage facilities
- Water desalination projects
- Decision support tools to model regional water management strategies to account for climate change and other changes in regional demand and supply projections
- Improvement of water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff

Regional projects or programs as defined by the IRWM Planning Act

### 11. IRWM Plan Objectives

The following objectives have been identified for the Greater Monterey County IRWM Plan. Please select all of the objectives that the project will address, and very briefly explain (unless it is *entirely obvious*) how your project will address each objective. (For concept proposals, you need not provide the justification.)

	Objective	Justification
<b>Water Supply Goal</b>		
<input checked="" type="checkbox"/>	Increase groundwater recharge and protect groundwater recharge areas.	Additional stormwater yields ( <b>estimated at 200-300 afy</b> ) facilitated by the 33-inch line condition assessment/rehabilitation will be used for either: <ol style="list-style-type: none"> <li>1. CSIP crop irrigation (helping to protect municipal potable water supply for the City of Salinas &amp; community of Castroville from seawater intrusion); or,</li> <li>2. PWM groundwater recharge and the development of a drought reserve for future supply shortages on the monterey peninsula. The drought reserve will enable water resource managers to divert flows that would normally be dedicated to the PWM AWPf to the SVRP for crop irrigation in drought conditions.</li> </ol>
<input checked="" type="checkbox"/>	Optimize the use of groundwater storage with infrastructure enhancements and improved operational techniques.	Additional stormwater yields (estimated at 200-300 afy) facilitated by the 33-inch line condition assessment/rehabilitation will be used for either: <ol style="list-style-type: none"> <li>1. CSIP crop irrigation (helping to protect municipal potable water supply for the City of Salinas &amp; community of Castroville from seawater intrusion); or,</li> <li>2. PWM groundwater recharge and the development of a drought reserve for future supply shortages on the monterey peninsula. The drought reserve will enable water resource managers to divert flows that would normally be dedicated to the PWM AWPf to the SVRP for crop irrigation in drought conditions.</li> </ol>
<input checked="" type="checkbox"/>	Increase and optimize water storage and conveyance capacity through construction, repair, replacement, and augmentation of infrastructure.	The 33-inch pipeline (abandoned-in-place) is identified as an opportunity to utilize existing infrastructure to achieve energy savings by separately conveying storm water to Pond 1 directly, bypassing the influent pump station and aeration basin.
<input checked="" type="checkbox"/>	Diversify water supply sources, including but not limited to the use of recycled water.	Use of the refurbished pipeline will provide a doubling of the capacity for storm water capture and storage for recycling during summer months. This water will be used in CSIP and the Salinas Valley Groundwater

		Basin, or potentially in the future of urban water supplies
<input type="checkbox"/>	Maximize water conservation programs.	
<input checked="" type="checkbox"/>	Capture and manage storm water runoff.	Use of the refurbished pipeline will provide a doubling of the capacity for storm water capture and storage for recycling during summer months.
<input checked="" type="checkbox"/>	Optimize conjunctive use where appropriate.	This project combines industrial waste water reuse with stormwater capture and re-use, surface and ground water storage and conveyance.
<input type="checkbox"/>	Support research and monitoring to better understand water supply needs.	
<input checked="" type="checkbox"/>	Support the creation of water supply certainties for local production of agricultural products.	This project will increase water supply going to CSIP and the SVGB
<input type="checkbox"/>	Promote public education about water supply issues and needs.	
<input type="checkbox"/>	Promote planning efforts to provide emergency drinking water to communities in the region in the event of a disaster.	
<b>Water Quality Goal</b>		
<input checked="" type="checkbox"/>	Promote practices necessary to meet, or where practicable, exceed all applicable water quality regulatory standards (for drinking water, surface and groundwater quality).	Assist the City in meeting total maximum daily load (TMDL) requirements by maximizing capture and treatment of IWW and storm water that would otherwise contribute to constituent loads to the CWA Section 303(d)-listed Salinas River;  Improve downstream habitat for special-status species in the Salinas River lagoon and in the Monterey Bay National Marine Sanctuary through reduction of constituent loads
<input checked="" type="checkbox"/>	Promote projects to prevent seawater intrusion.	This project will increase water supplies for the CSIP. This will result in decrease ground water pumping from the coastal areas, preventing additional seawater intrusion.
<input type="checkbox"/>	Incorporate or promote principles of low impact development where feasible, appropriate, and cost effective.	
<input checked="" type="checkbox"/>	Protect surface waters and groundwater basins from contamination and the threat of contamination.	Assist the City in meeting total maximum daily load (TMDL) requirements by maximizing capture and treatment of IWW and storm water that would otherwise contribute to constituent loads to the CWA Section 303(d)-listed Salinas River;  Improve downstream habitat for special-status species in the Salinas River lagoon and in the Monterey Bay National Marine Sanctuary through reduction of constituent loads
<input checked="" type="checkbox"/>	Support research and pilot projects for the co-management of food safety and water quality protection.	The constructed wetlands will pilot removal efficiency for phosphorus, a constituent in the disinfectants used by industrial processors for



		food safety of agricultural products, including bagged lettuce. The phosphorus loadings originating from the IWW have proved a challenge to treat at M1W's TP and reductions thereof may assist in improving water quality for more efficient treatment for beneficial reuse for either PWM or CSIP
<input type="checkbox"/>	Improve septic systems, sewer system infrastructure, wastewater treatment systems, and manure management programs to prevent water quality contamination.	
<input type="checkbox"/>	Support research and other efforts on salinity management.	
<input type="checkbox"/>	Support monitoring to better understand major sources of erosion, and implement a comprehensive erosion control program.	
<input checked="" type="checkbox"/>	Promote programs and projects to reduce the quantity and improve the quality of urban and agricultural runoff and/or mitigate their effects in surface waters, groundwater, and the marine environment.	35 acres restored to wetland habitat; additional opportunities for reusing agricultural product flows to reduce groundwater pumping
<input type="checkbox"/>	Promote regional monitoring and analysis to better understand water quality conditions.	
<input checked="" type="checkbox"/>	Support research and utilization of emerging technologies (enzymes, etc.) to develop effective water pollution prevention and mitigation measures, and source tracking.	Evaluate and define water quality constraints and assess alternative, emerging treatment technologies to maximize beneficial reuse of industrial wastewater (IWW) and storm water and investigate beneficial nutrient recovery for agriculture  Assess the feasibility and effectiveness of natural wetlands and sustainable media filtration bioreactors for passive treatment of IWW as an alternative to traditional treatment methods
<input type="checkbox"/>	Promote public education about water quality issues and needs.	
<b>Flood Protection &amp; Floodplain Management Goal</b>		
<input checked="" type="checkbox"/>	Promote projects and practices to protect infrastructure and property from flood damage.	Use of the refurbished pipeline will also provide a doubling of the capacity for storm water capture. Improvement of downstream flooding conditions will positively impact the agricultural fields and residences that line the lower Salinas River and experience periodic flooding due to storm water discharge into the Salinas River.
<input checked="" type="checkbox"/>	Improve flood management infrastructure and operational techniques/strategies.	Use of the refurbished 33-inch pipeline will also provide a doubling of the capacity for storm water capture and storage for recycling during summer months. Improvement of downstream flooding conditions will positively impact the agricultural fields and residences that line



		the lower Salinas River and experience periodic flooding due to storm water discharge into the upper Salinas River.
<input checked="" type="checkbox"/>	Implement flood management projects that provide multiple benefits such as public safety, habitat protection, recreation, agriculture, and economic development.	Use of upgraded 33-inch pipeline and associated passive treatment technologies proposed to be investigated would improve public safety (reduced Salinas River pollutant loads, reduced flood events), improve habitat and recreational use of the Salinas River and protect agricultural land and thus improve sustainability of economic benefits.
<input checked="" type="checkbox"/>	Develop and implement projects to protect, restore, and enhance the natural ecological and hydrological functions of rivers, creeks, streams, and their floodplains.	A reduction of up to 200-300 acre-feet/year (AFY) of storm water discharges to the Salinas River during large storm events, restoring a more natural hydrograph along the lower reaches of the Salinas River
<input type="checkbox"/>	Support research and monitoring efforts to understand the effects of flooding on transport and persistence of pathogens in food crop production areas.	
<input checked="" type="checkbox"/>	Support management of flood waters so that they do not contaminate fresh produce in the field.	Use of the refurbished pipeline will also provide a doubling of the capacity for storm water capture and storage for recycling during summer months. Improvement of downstream flooding conditions will positively impact the agricultural fields and residences that line the lower Salinas River and experience periodic flooding due to storm water discharge into the upper Salinas River.
<input type="checkbox"/>	Promote public education about local flood management issues and needs.	
<b>Environment Goal</b>		
<input checked="" type="checkbox"/>	Support science-based projects to protect, improve, enhance, and/or restore the region's ecological resources, while providing opportunities for public access and recreation where appropriate.	Creation of the treatment wetland will benefit the environment by reducing nitrate and phosphorus that would contribute to constituent loads to the CWA Section 303(d)-listed Salinas River. This in turn will improve ecological resources and recreational uses in the Salinas River and Monterey Bay.
<input checked="" type="checkbox"/>	Protect and enhance state and federally listed species and their habitats.	Creation of the treatment wetland will benefit the environment by reducing nitrate and phosphorus that would contribute to constituent loads to the CWA Section 303(d)-listed Salinas River. This in turn will improve downstream habitat for special-status species in the Salinas River Lagoon and in the Monterey Bay National

		Marine Sanctuary
<input type="checkbox"/>	Minimize adverse environmental impacts of water resource management projects.	
<input type="checkbox"/>	Support applied research and monitoring to better understand environmental conditions, environmental water needs, and the impacts of water-related projects on environmental resources.	
<input type="checkbox"/>	Implement fish-friendly stream and river corridor restoration projects.	
<input checked="" type="checkbox"/>	Reduce adverse impacts of sedimentation into streams, particularly from roads and non-point sources.	Increased storm water yield will reduce amount of sedimentation entering the salinas river from the City's MS4 system.
<input type="checkbox"/>	Promote efforts to prevent, control, reduce, and/or eradicate high priority invasive species.	
<input type="checkbox"/>	Promote native drought-tolerant plantings in municipal and residential landscaping.	
<input type="checkbox"/>	Consider opportunities to purchase fee title or conservation easements on lands from willing sellers that provide integrated water resource management benefits. Ensure adequate funding and infrastructure to manage properties and/or monitor easements.	
<input type="checkbox"/>	Support research and monitoring efforts to understand the effects of wildfire events on water resources.	
<b>Regional Communication and Cooperation Goal</b>		
	Facilitate dialogue and reduce inconsistencies in water management strategies/regulations between local, regional, state, and federal entities.	
<input checked="" type="checkbox"/>	Promote dialogue between federal and state regulators and small water system managers to facilitate water quality regulation compliance.	Project must approval from the Regional Water Quality Control Board, City of Salinas, Monterey One Water and Central Coast Wetlands Group.
<input checked="" type="checkbox"/>	Foster collaboration between regional entities to minimize and resolve potential conflicts and to obtain support for responsible water supply solutions and improved water quality.	This is a collaborative project between CCWG, City of Salinas, Monterey One Water, and the Salinas Valley GSA
<input checked="" type="checkbox"/>	Build relationships with federal, state, and local regulatory agencies and other water agencies to facilitate the permitting, planning, and implementation of water-related projects.	CCWG/MLML is partnering with the City of Salinas and M1W to facilitate this pilot project.
<input type="checkbox"/>	Increase stakeholder input and public education about the need, complexity, and cost of strategies, programs, plans, and projects to improve water supply, water quality, flood management, coastal conservation, and environmental protection.	
<b>Disadvantaged Communities Goal</b>		
<input checked="" type="checkbox"/>	Seek funding opportunities to ensure all communities have a water system with adequate, safe, high-quality drinking water.	This project will enhance groundwater resources in the Salinas Valley Groundwater Basin, the shared potable water supply of agricultural and municipal users including the City of Salinas and community of Castroville
<input type="checkbox"/>	Seek funding opportunities to ensure all communities have adequate wastewater treatment.	
<input checked="" type="checkbox"/>	Ensure that disadvantaged communities are adequately protected from flooding and the impacts of poor surface and groundwater quality.	Water quality improvements to the Salinas River resulting from the reduced storm water discharges protect the River's beneficial uses;

		increased influent to RTP provides additional flow for recycling and agricultural irrigation helping slow seawater intrusion in the SVGB which threatens the municipal potable water supply for the City of Salinas and community of Castroville
<input type="checkbox"/>	Provide support for the participation of disadvantaged communities in the development, implementation, monitoring, and long-term maintenance of water resource management projects.	
<input type="checkbox"/>	Promote public education in disadvantaged communities about water resource protection, pollution prevention, conservation, water quality, and watershed health.	
<b>Climate Change Goal</b>		
<input type="checkbox"/>	Plan for potential impacts of future climate change.	
<input type="checkbox"/>	Support increased monitoring and research to obtain greater understanding of long-term impacts of climate change in the Greater Monterey County region.	
<input type="checkbox"/>	Support efforts to research alternative energy and to diversify energy sources appropriate for the region, and consider options for using renewable energy where such options are integrally tied to supporting IRWM Plan objectives.	
<input checked="" type="checkbox"/>	Seek long-term solutions to reduce energy consumption, especially the energy embedded in water use, with a goal to reducing greenhouse gas (GHG) emissions	Allowing storm water to bypass unnecessary aeration would result in an estimated 10% reduction in the overall energy consumption of the IWTF.
<input type="checkbox"/>	Seek long-term solutions to maintain and protect existing pristine natural resources from the impacts of climate change.	
<input checked="" type="checkbox"/>	Address adapting to changes in the amount, intensity, timing, quality, and variability of runoff and recharge.	Use of the refurbished pipeline will also provide a doubling of the capacity for storm water capture and storage for recycling during summer months. Improvement of downstream flooding conditions will positively impact the agricultural fields that line the lower Salinas River and experience periodic flooding due to storm water discharge into the Salinas River.
<input type="checkbox"/>	Consider the effects of sea level rise on water supply conditions and identify suitable adaptation measures.	
<input checked="" type="checkbox"/>	In considering ways to address IRWM Plan objectives and implement the Plan, consider where practical the strategies adopted by California Air Resources Board (CARB) in its AB 32 Scoping Plan.	Project reduces operational energy demands and improves water supply yields of the previously approved Salinas Storm Water Project
<input type="checkbox"/>	Support research and/or implementation of land-based efforts such as carbon-sequestration on working lands and wildlands in the Greater Monterey County region.	
<input type="checkbox"/>	Promote public education about impacts of climate change, particularly as it relates to water resource management in the Greater Monterey County region.	

## SECTION II. RESOURCE MANAGEMENT STRATEGIES AND CLIMATE CHANGE

*This section is required for all implementation projects. If your project is a concept proposal, there is no need to complete this section (or any of the following sections of this application form).*

### 12. Do you want your project to be considered for Round 1 of the Proposition 1 IRWM Implementation Grant Program?

- Yes  
 No

### 13. Resource Management Strategies

One of the goals of integrated regional water management planning is to encourage diversification of water management approaches. Please select the strategies that your project will use (check all that apply):

#### Reduce Water Demand

- Agricultural Water Use Efficiency NO  
 Urban Water Use Efficiency NO

#### Improve Operational Efficiency and Transfers

- Conveyance  
 System Reoperation  
 Water Transfers  
 Infrastructure Reliability

#### Increase Water Supply

- Conjunctive Management & Groundwater Storage  
 Desalination  
 Precipitation Enhancement  
 Recycled Municipal Water  
 Surface Storage  
 Storm Water Capture and Management

#### Improve Water Quality

- Drinking Water Treatment and Distribution  
 Groundwater/Aquifer Remediation  
 Matching Water Quality to Use  
 Pollution Prevention  
 Salt and Salinity Management  
 Urban Runoff Management  
 Water and Wastewater Treatment

#### Practice Resources Stewardship

- Agricultural Lands Stewardship  
 Ecosystem Restoration  
 Forest Management  
 Land Use Planning and Management  
 Recharge Area Protection  
 Sediment Management  
 Watershed Management  
 Environmental and Habitat Protection and Improvement  
 Wetlands Enhancement and Creation

#### Improve Flood Management

- Flood Management

#### People and Water

- Economic Incentives (Loans, Grants, and Water Pricing)  
 Outreach, Engagement, and Education  
 Water and Culture  
 Water-Dependent Recreation  
 Regional Cooperation  
 Recreation and Public Access

#### Other Resource Management Strategies

- Dewvaporation or Atmospheric Pressure Desalination  
 Fog Collection  
 Rainfed Agriculture  
 Monitoring and Research

#### 14. Climate Change Adaptation

a) Does your project contribute to climate change adaptation? If so, what climate change vulnerabilities in the region does your project respond to, specifically? (For vulnerabilities in the Greater Monterey County IRWM region, see Chapter R Climate Change of the IRWM Plan, specifically Section R6, available at: <http://www.greatermontereyirwmp.org/documents/plan/>) Please describe how, and to what extent.

This project will address the following vulnerabilities from table R-7 of the IRWMP Climate Change Chapter:

- Agricultural water use is expected to increase to offset higher temperatures and evapotranspiration
  - This project will expand water supplies (purple pipe) and storage, address aquifer management, and expand agriculture water conservation programs.
- Domestic landscaping and recycled water irrigation needs will be higher
  - This project is aimed specifically at capturing additional seasonal urban storm water runoff. These water sources will be passed through an experimental treatment wetland before conveyance to M1W's Treatment Plant for beneficial reuse in the SVRP and CSIP, which enable recycling of water to reduce groundwater pumping from increasingly over drafted and seawater-intruded Salinas Valley Groundwater Basin. Additional flows may also be utilized for indirect potable reuse at the Pure Water Monterey (PWM) Advanced Water Purification Facility (AWPF), including the development of a drought reserve which can be utilized by Monterey Peninsula water users during drought years to enable flows normally dedicated to the AWPF to be utilized at the SVRP for additional irrigation supply.
- Local rainfall is estimated to be reduced by 3-10 inches
  - This project will expand water supplies (purple pipe) and storage, address aquifer management, and expand agriculture water conservation programs.
- Sea level rise and higher groundwater extraction will lead to increased rates of saltwater intrusion
  - This project will expand water recycled supplies (purple pipe) and storage, address aquifer management, and expand agriculture water conservation programs. This will reduce groundwater pumping in the coastal areas of the county, reducing the rates of saltwater intrusion.
- Droughts will be more frequent and severe
  - This project will expand recycled water supplies (purple pipe) for agricultural and urban water uses and storage, address aquifer management, and expand agriculture water conservation programs
- Lower seasonal surface flows can lead to higher pollutant concentrations
  - Seasonal industrial wastewater, urban storm water and dry weather runoff water will be passed through an experimental treatment wetland for removal of nitrate loads, buffer of water pH, minimization of residual biological and chemical oxygen demand and phosphate removal. This stormwater capture will reduce delivery of sediment and organic matter to receiving waters by letting particulates to settle out and allowing chemical and biological transformation (degradation) to occur, reducing pollutant loads into receiving waters.
- Changes in storm intensity will increase sediment loading in many systems
  - Seasonal industrial wastewater, urban storm water and dry weather runoff water will be passed through an experimental treatment wetland for removal of nitrate loads, buffer of water pH, minimization of residual biological and chemical oxygen demand, and phosphate removal. This stormwater capture will reduce delivery of sediment and organic matter to receiving waters by letting particulates to settle out and allow chemical and biological transformation (degradation) to occur, reducing nutrient input into receiving waters.

- Natural creeks throughout the region and managed conveyance within the Salinas Valley will see higher flow rates leading to increased erosion and flooding
  - This project will result in a reduction of up to 200-300 acre-feet/year (AFY) of storm water discharges to the Salinas River during large storm events
  - Use of the pipeline will also provide a doubling of the capacity for storm water capture and storage for recycling during summer months. Improvement of downstream flooding conditions will positively impact the agricultural fields that line the lower Salinas River and experience periodic flooding due to storm water discharge into the upper Salinas River.
- Coastal wetland systems are especially vulnerable to the combined influences of climate change
  - Up to 500,000 gallons per day of source water will be treated in the treatment wetland system, reducing nitrogen and phosphorus, buffering pH, and minimizing biological and chemical oxygen demand of the storm water and industrial waste water. Improved water quality will benefit special-status species in Salinas River Lagoon and Monterey Bay National Marine Sanctuary as well as helping Monterey County communities to meet TMDLs requirements for both nutrients.

b) Does your project consider the effects of sea level rise on water supply conditions and identify suitable adaptation measures?

Yes. Sea level rise issues were considered in the development of this project. This project increases water supply for the region and reduces pumping of the coastal aquifer. This will assist in pushing back against sea water intrusion which may increase as a result of SLR.

c) Does the project take into consideration changes in the amount, intensity, timing, quality and variability of runoff and recharge?

Yes. This project will result in a reduction of up to 200-300 acre-feet/year (AFY) of storm water discharges to the Salinas River during large storm events. Use of the pipeline will also provide a doubling of the capacity for storm water capture and storage for recycling during summer months. Improvement of downstream flooding conditions will positively impact the agricultural fields and several residences that line the lower Salinas River and experience periodic flooding due to storm water discharge into the Salinas River.

## 15. Reduction of Greenhouse Gas Emissions

a) Please describe the extent to which your project will help reduce greenhouse gas (GHG) emissions, compared to project alternatives. To assist you in estimating GHG emissions, please use the *California Emissions Estimator Tool (CalEEMod)* available for download at <http://www.caleemod.com>. Guidance documents to help you use the tool are available on the Greater Monterey County IRWM website at: <http://www.greatermontereyirwmp.org/documents/solicitation/>.

Rehabilitation of the abandoned 33-inch pipeline will allow diverted urban storm water to bypass aeration at the IWTF (an energy-intensive treatment process) required for industrial wastewater, which will result in an estimated 10% reduction in the overall energy consumption of the industrial wastewater treatment facility.

b) If appropriate, describe the extent to which the project will help the region reduce GHG emissions over the next 20 years.

Monterey One Water and CSIP growers have opined that diverting industrial wastewater to Monterey One Water's TP may have adversely impacted treatment efficiency by increasing chemical and energy use/costs, biosolids production and backwashing cycles at SVRP (i.e., reducing recycled water yield and/or increasing costs for the CSIP growers). Phosphate removal within a wastewater treatment facility using conventional methods can be challenging since infrastructure, energy and chemical costs of phosphate treatment can be prohibitive. CCWG and Monterey One Water are working in partnership with the City to pilot a passive water treatment system at the IWTF that is capable of removing phosphates from source water before conveyance to the TP for beneficial reuse. In the long run this will reduce energy use and GHG emissions in the region.

c) To what extent will the project help reduce energy consumption, especially the energy embedded in water use, and ultimately reduce GHG emissions?

**Please see a) and b)**



### SECTION III. PROJECT NARRATIVE AND BUDGET

*Complete this and the following sections only if you would like your project to be considered for Round 1 Implementation Grant funds.*

**16. Project Description (1 page or so):** Please describe the proposed project. Provide a general discussion of the problem the project addresses, and describe major tasks/activities. Include any other information that supports the justification for this project, including how the project can achieve any claimed benefits.

The Salinas Water Quality and Agricultural Reuse Efficiency Project is proposed to occur at the Salinas Industrial Wastewater Treatment Facility (IWTF), and its associated conveyance system that serves approximately 25 agricultural processing and related businesses (“industrial dischargers”), owned and operated by the City of Salinas (City). See Figure B. IWTF Aerial and Figure C. City of Salinas Industrial Wastewater System<sup>1</sup> Facilities. The IWTF is also the implementation site for the Salinas Storm Water (SSW) Project, a partnership between the City and Monterey One Water (M1W) funded through a Proposition 1 Storm Water Grant. The SSW will divert storm water directly to the M1W Treatment Plant (TP) upgrade the IWTF to seasonally capture and store urban storm water and dry weather runoff for diversion to M1W TP during summer months when recycled water demands are higher. The Project will include two distinct components designed to:

- Evaluate and define water quality constraints and assess alternative treatment technologies to maximize beneficial reuse of industrial wastewater (IWW) and storm water and investigate beneficial nutrient recovery for agriculture;
- Assess the feasibility and effectiveness of natural wetlands and sustainable media filtration bioreactors for passive treatment of IWW as an alternative to traditional treatment methods;
- Achieve energy efficiencies and increased dry season yield of storm water capture and reuse in conjunction with the SSW Project;
- Assist the City in meeting total maximum daily load (TMDL) requirements by maximizing capture and treatment of IWW and storm water that would otherwise contribute to constituent loads to the CWA Section 303(d)-listed Salinas River;
- Improve downstream habitat for special-status species in the Salinas River lagoon and in the Monterey Bay National Marine Sanctuary through reduction of constituent loads;
- Enhance groundwater resources in the Salinas Valley Groundwater Basin, the shared potable water supply of agricultural and municipal users including the City of Salinas and community of Castroville (disadvantaged communities [DAC] per the Department of Water Resources);
- Augment TP influent flows in the summer, while minimizing new treatment costs, for beneficial reuse for one or both of the following recycled water programs:
  - Salinas Valley Reclamation Project (SVRP) and Castroville Seawater Intrusion Project (CSIP), the existing tertiary treatment and distribution system that supply agricultural irrigation water to reduce groundwater pumping in the critically-over drafted and increasingly seawater-intruded Salinas Valley Groundwater Basin (SVGB); and,
  - Pure Water Monterey (PWM), an indirect potable reuse and groundwater replenishment project that will enable the region to reduce Carmel River diversions for enhanced habitat for Central California Coast Steelhead, California red-legged frog, and other species.

**17. Project Need/Urgent Need:** Is there a special, urgent, or critical need for your project? If so, explain.

This project is special because it address so many issues currently of high priority in the GMC-IRWM region. The project is truly integrated in that it achieves **increased water supply for the region, reduced sea water**

**intrusion**, benefits to **water quality** in the Salinas River, and **supports research and utilization of emerging technologies** (enzymes, passive media/filters/bioreactors etc.) to develop effective water pollution prevention and mitigation measures.

The separate conveyance of storm water from IWW is critical to evaluating the efficiency of the natural treatment systems in the pilot study because it eliminates the influence of storm water from influent to the constructed system, creating a stable test condition (i.e., consistent water quality on an annual basis).

**18. Budget:** Please complete the following budget table. While only a “high level” budget is required at this time, please provide as much detail as possible. (The Regional Water Management Group is mainly interested in knowing that your budget is realistic and is based on actual costs.)

	<b>Non-State Cost Share</b>	<b>Requested Grant Amount</b>	<b>Other State Cost Share</b>	<b>Total Cost</b>
(a) Project Admin		165,000		
(b) Land Purchase/Easement	400,000			
(c) Planning/Design/Engineering/Environmental		120,000		
(d) Construction/Implementation	590,000	705,000		
<b>(e) Total</b>	<b>\$990,000</b>	<b>\$990,000</b>		<b>1,980,000</b>

**19. Cost Share:** DWR requires that proposals provide at minimum 50% non-State cost share. DWR awards additional points for proposals that provide more than the required 50% non-State cost share. Describe your cost share, and sources of cost share funds.

Match funds to be provided from in-kind staff time, other conjunctive City-funded Storm Water and Industrial Wastewater infrastructure improvements, and/or Pure Water Monterey project costs funded by Monterey One Water.

**20. Disadvantaged Communities:** Does the project provide direct water-related benefits to a project area entirely comprised of Disadvantaged Communities (DACs) and/or Economically Distressed Areas (EDAs)? If so, explain. (If you need help with this question, contact Susan at [srobinsongs@frontier.com](mailto:srobinsongs@frontier.com))

The project will enhance groundwater resources in the Salinas Valley Groundwater Basin, the shared potable water supply of agricultural and municipal users including the City of Salinas and community of Castroville (disadvantaged communities [DAC] per the Department of Water Resources)

Will you be requesting a full or partial cost-share waiver based on DAC/EDA status? Possibly, if based on benefitting communities?

**21. Operations and Maintenance:** Please describe how operations and maintenance of the project will be supported.

This project is supported by Central Coast Wetlands Group/CSUMB/UCMBEST Monterey One Water, the City of Salinas, and the Salinas Valley GSA . All ongoing operations and maintenance of the facilities created from this project will be address by these three collaborating entities.

**22. Storm Water Resource Plan Requirements:** Is the project a storm water or dry weather runoff capture project? If so, is it included in a Storm Water Resource Plan?

Yes and Yes.

**23. Groundwater:** Will the project affect groundwater levels? (yes or no)

Yes, benefits to groundwater levels are anticipated due to more consistent percolation at the IWTF

**24. AB 1249 Requirements:** Does the project address nitrate, arsenic, or hexavalent chromium contamination in the region? If so, how?

Yes, see the TMDL nutrient project report (CCRWQCB)

**25. Stakeholder Coordination:** Please briefly describe the nature of stakeholder coordination for planning, developing, and implementing the project.

Copy from #21 above

## SECTION IV. COMPLIANCE

Complete this section only if you would like your project to be considered for Round 1 Implementation Grant funds.

To be eligible for IRWM Implementation Grant funds, project proponents must comply with the following.

### 26. Adoption of IRWM Plan

Proposition 1 IRWM Program Guidelines require that each project proponent named in an IRWM Grant application adopt the IRWM Plan. Please check if your agency/organization:

- Has already adopted the IRWM Plan
- Hereby commits to adopting the IRWM Plan, if the project is selected for submission in an IRWM Grant application

### 27. Urban Water Management Compliance

If your agency meets the definition of an urban water supplier (“supplier, either publicly or privately owned, that provides water for municipal purposes, either directly or indirectly, to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually”), you must demonstrate compliance with certain requirements.

These include:

- DWR-approved 2015 Urban Water Management Plan
- Verification from DWR that your agency submitted a validated water loss audit report (SB 555).
- Compliance with the water metering requirements (CWC section 525)

Is your agency an urban water supplier, and if so, can it meet these requirements?

- Yes, my agency is an urban water supplier and I can demonstrate compliance with these requirements.
- No, my agency is an urban water supplier but I cannot demonstrate compliance with these requirements.
- N/A: My agency is not an urban water supplier.

### 28. Agricultural Water Management and Measure Compliance

If your agency/organization is an agricultural water supplier? If your agency/organization is an agricultural water supplier that supplies more than 2,000 acre-feet of water or water to more than 2,000 irrigated acres, excluding recycled water, you must demonstrate compliance with certain requirements. (And if you supply less than that, you must provide documentation stating as such.) The requirements depend on the amount of irrigated acreage that you supply water to. Please see the IRWM Implementation Grant Program 2018 Draft PSP, pp. 21-22, for a list of those requirements (available at: <https://water.ca.gov/Work-With-Us/Grants-And-Loans/IRWM-Grant-Programs/Proposition-1/Implementation-Grants>).

- Yes, my agency is an agricultural water supplier and I can supply these documents.
- No, my agency is an agricultural water supplier but I cannot supply these documents at this time.
- N/A: My agency is not an agricultural water supplier.

### 29. Surface Water Diverter Compliance

If your agency/organization is a surface water diverter, you must state whether your agency/organization has submitted to the State Water Resources Control Board your annual surface water diversion reports. Is your agency/organization a surface water diverter, and if so, can it meet this requirement?

- Yes, my agency is a surface water diverter and I can verify that we meet this requirement.
- No, my agency is a surface water diverter but we have not met this requirement.

N/A: My agency is not a surface water diverter.

## SECTION V. ROUND 1 PROJECT INFORMATION FORM

Please complete and submit the **Project Information Form** to Susan Robinson, Greater Monterey County IRWM Program Director, by **January 7, 2019**. This is a separate PDF form available at:

<http://www.greatermontereyirwmp.org/documents/solicitation/>.

*Complete the **Project Information Form** only if you would like your project to be considered for Round 1.*

The **Project Information Form** was developed by the Department of Water Resources (DWR). It contains the actual questions that each project proponent must address for the Region's Round 1 application for Implementation Grant funds. This **Project Information Form** is still in draft form; some questions may change between now and the final application process. If your project is selected for Round 1, you will have another opportunity to revise your responses on this form, if necessary, before the Regional Water Management Group submits its Round 1 Implementation Grant application to the State.

Note that if your project is selected for the Round 1 application, you will need to be physically present for a Pre-application Workshop (time and location TBD) during which time DWR staff will review your project information and ask questions.

The information below in blue font is provided, for your information, to help you respond to certain questions on the **Project Information Form**.

### A. PROJECT INFORMATION

**Question 5. DAC question:** No need to provide a map at this time.

**Question 8. Funding Category:** Your project is a "DAC Implementation Project" only if your project directly and entirely benefits a disadvantaged community.

**Question 9. Project Type:** Click on "Other" to see the categories.

### B. SELECTED ELIGIBILITY REQUIREMENTS

**Question 2. How the Project Addresses the Critical Need(s) of the Region:** Based on the objectives you selected in Section I Question 11 above, please explain how your project addresses the critical needs of the region.

**Question 4. Climate Change:** You need to explain how your project addresses climate change vulnerabilities specifically for the Greater Monterey County region, if applicable. Vulnerabilities for the Greater Monterey County region are described in Chapter R, Climate Change, of the IRWM Plan, and specifically Section R.6 that begins on p. R-20. This chapter can be downloaded at:  
<http://www.greatermontereyirwmp.org/documents/plan/>)

**Question 5. Regional Water Self-Reliance:** This question is actually intended for regions that depend on water from the Delta watershed. However, if your project includes one of the following, it contributes to regional water self-reliance: water use efficiency, water recycling, advanced water technologies, local and regional water supply project, or improved regional coordination of local and regional water supply efforts.

**Question 6. Statewide Priorities.** Statewide priorities include the following (see pp. 9-10 of the Prop 1 2016 IRWM Grant Program Guidelines Volume 1 for a full description of these priorities):

- ☐ Make conservation a California way of life
  - Building on current water conservation efforts and promoting the innovation of new systems for increased water conservation.
  - Expand agricultural and urban water conservation and efficiency to exceed SB-X7-7 targets
  - Provide funding for conservation and efficiency
  - Increase water sector energy efficiency and greenhouse gas reduction capacity
  - Promote local urban conservation ordinances and programs
  
- ☐ Increase regional self-reliance and integrated water management across all levels of government
  - Ensure water security at the local level, where individual government efforts integrate into one combined regional commitment where the sum becomes greater than any single piece.
  - Support and expand funding for Integrated Water Management planning and projects
  - Improve land use and water alignment
  - Provide assistance to disadvantaged communities
  - Encourage State focus on projects with multiple benefits
  - Increase the use of recycled water
  
- ☐ Protect and restore important ecosystems
  - Continue protecting and restoring the resiliency of our ecosystems to support fish and wildlife populations, improve water quality, and restore natural system functions.
  - Restore key mountain meadow habitat
  - Manage headwaters for multiple benefits
  - Protect key habitat of the Salton Sea through local partnership
  - Restore coastal watersheds
  - Continue restoration efforts in the Lake Tahoe Basin
  - Continue restoration efforts in the Klamath Basin
  - Water for wetlands and waterfowl
  - Eliminate barriers to fish migration
  - Assess fish passage at large dams
  - Enhance water flows in stream systems statewide
  
- ☐ Manage and prepare for dry periods
  - Effectively manage water resources through all hydrologic conditions to reduce impacts of shortages and lessen costs of state response actions. Secure more reliable water supplies and consequently improve drought preparedness and make California's water system more resilient.
  - Revise operations to respond to extreme conditions
  - Encourage healthy soils
  
- ☐ Expand water storage capacity and improve groundwater management
  - Increase water storage for widespread public and environmental benefits, especially in increasingly dry years and better manage our groundwater to reduce overdraft.
  - Provide essential data to enable Sustainable Groundwater Management
  - Support funding partnerships for storage projects
  - Improve Sustainable Groundwater Management
  - Support distributed groundwater storage
  - Increase statewide groundwater recharge
  - Accelerate clean-up of contaminated groundwater and prevent future contamination
  
- ☐ Provide safe water for all communities
  - Provide all Californians the right to safe, clean, affordable and accessible water
  - adequate for human consumption, cooking, and sanitary purposes.

- Consolidate water quality programs
- Provide funding assistance for vulnerable communities
- Manage the supply status of community water systems
- Additionally, as required by Water Code §10545, in areas that have nitrate, arsenic, perchlorate, or hexavalent chromium contamination, consideration will be given to grant proposals that included projects that help address the impacts caused by nitrate, arsenic, perchlorate, or hexavalent chromium contamination, including projects that provide safe drinking water to small disadvantaged communities.

Increase flood protection

- Collaboratively plan for integrated flood and water management systems, and implement flood projects that protect public safety, increase water supply reliability, conserve farmlands, and restore ecosystems.
- Improve access to emergency funds
- Better coordinate flood response operations
- Prioritize funding to reduce flood risk and improve flood response
- Encourage flood projects that plan for climate change and achieve multiple benefits

Increase operational and regulatory efficiency

This action is directed towards State and federal agencies; however, consideration will be afforded to eligible local or regional projects that also support increased operational of the State Water Project or Central Valley Project

### C. WORK PLAN, BUDGET, AND SCHEDULE

Please summarize the work plan and budget information that you provided (in detail) in Section III above.

### D. OTHER PROJECT INFORMATION

**Question 5. Does the project address a contaminant listed in AB 1249?** These contaminants are, specifically: nitrate, arsenic, hexavalent chromium, and perchlorate.

A “disadvantaged community” (or DAC) is defined as a community with an annual median household income that is less than 80% of the statewide annual median household income, or according to the latest census data, less than \$51,026. A “small disadvantaged community” is defined as a DAC that has a yearlong population of no more than 10,000 people.



## **HOW TO SUBMIT YOUR APPLICATION:**

This Project Application Form is due **DECEMBER 3, 2018.**

The Project Information Form is due **JANUARY 7, 2019.**

Please email your completed applications to Susan Robinson, Greater Monterey County IRWM Program Director, at [srobinsongs@frontier.com](mailto:srobinsongs@frontier.com).

If you do not have email access, please mail or hand-deliver one copy of your application to:

Bridget Hoover  
Monterey Bay National Marine Sanctuary  
99 Pacific Street, Building 455  
Monterey, CA 93940

## **FOR QUESTIONS ABOUT THE APPLICATION FORM OR THE IRWM PLANNING PROCESS:**

Please visit our website: [www.greatermontereyirwmp.org](http://www.greatermontereyirwmp.org)

Or contact:

Susan Robinson  
Program Director  
Greater Monterey County IRWM Program  
[srobinsongs@frontier.com](mailto:srobinsongs@frontier.com)  
(802) 279-4615