



A11. Program Preferences

Program Preferences Met by Proposal

This attachment demonstrates that this Proposal contains significant, dedicated, and well-defined projects that meet multiple Program Preferences of the California Department of Water Resources (DWR) Proposition 84 (Prop 84) IRWM Guidelines. Five out of six of the Program Preferences are met by the projects included in this Proposal. All seven projects meet more than one Program Preference. This attachment details the specific Program Preferences met by each of the projects, certainty that the Proposal projects will meet the Program Preferences, and the breadth and magnitude to which the Program Preferences will be met. Exhibit 11-1 lists the name of each project and identifies which Program Preferences are met by the project.

Several projects address long-term drought preparedness. Strategies such as leak detection and repair; use of lower quality groundwater to replace potable use for landscaping; replacement of vulnerable infrastructure critical to groundwater banking; and water recycling are all employed to conserve, store, and reuse water in preparation for drought. The projects that use these strategies include the following:

- **Project 1: City of Lompoc, Lompoc Valley Leak Detection and Repair Project** – Augments regional drought preparedness by conserving water currently lost through leaks in the water distribution system.
- **Project 2: City of Santa Maria, Untreated Water Landscape Irrigation Project** – Substitutes lower-quality water for landscape irrigation instead of potable water. Also, reuse of old production wells increases supply reliability by increasing groundwater pumping capability.
- **Project 3: City of Santa Maria, LeakWatch Project** – Conserves water lost through leaks, which extends existing water supplies. The Project extends local groundwater supplies and reduces need for imported water; reduces leaks and seepage up to 210 acre-feet per year (AFY) at full implementation; and reduces per capita use by 2 gallons per day (gpd).
- **Project 5: Central Coast Water Authority (CCWA), Water Supply Reliability and Infrastructure Improvement Project** – Prevents imminent pipeline damage and a potential catastrophic break of the regional state water project (SWP) pipeline. The Project gives South Coast Water Agencies the ability to participate in groundwater banking outside of the immediate area, further increasing water supply reliability through opportunities for conjunctive use.
- **Project 6: Goleta Sanitary District, Wastewater Treatment Plant Upgrade** – Increases capacity of the secondary treatment facilities ensuring that a more reliable

source of treated wastewater will be available for tertiary treatment at the existing water reuse facility.

- **Project 7: City of Guadalupe, Recycled Water Feasibility Study** – Studies the development of adequate infrastructure to distribute recycled water to more customers for irrigation and industrial use, preserving groundwater for use during droughts.

EXHIBIT 11-1

Program Preferences Met by Projects

Project	Program Preferences Met By Projects				
	Integrate Projects within Hydrological Subregion	Contribute to Attainment of One or More CALFED Objectives	Address Critical Water Supply or Quality Needs of DAC	Flood Control Projects that Provide Multiple Benefits	Address Statewide Priorities
1 City of Lompoc, Lompoc Valley Leak Detection and Repair Project	✓	✓	✓		✓
2 City of Santa Maria, Untreated Water Landscape Irrigation Project		✓	✓		✓
3 City of Santa Maria, LeakWatch Project		✓	✓		✓
4 City of Goleta, San Jose Creek Capacity Improvement and Fish Passage Project			✓	✓	✓
5 CCWA, Water Supply Reliability and Infrastructure Improvement Project		✓			✓
6 Goleta Sanitary District, Wastewater Treatment Plant Upgrade	✓	✓			✓
7 City of Guadalupe, Recycled Water Feasibility Study		✓	✓		✓

DAC = disadvantaged community

One of the Program Preferences is “Address Statewide Priorities.” All of the projects in this Proposal address one or more Statewide Priorities.

EXHIBIT 11-2

Projects That Meet Statewide Priorities

Project	Statewide Priorities						
	Drought Preparation	Use and Reuse Water More Efficiently	Climate Change Response Actions	Expand Environmental Stewardship	Practice Integrated Flood Management	Protect Surface Water and Groundwater Quality	Ensure Equitable Distribution of Benefits
1 City of Lompoc, Lompoc Valley Leak Detection and Repair Project	✓	✓	✓				✓
2 City of Santa Maria, Untreated Water Landscape Irrigation Project	✓	✓	✓			✓	✓
3 City of Santa Maria, LeakWatch Project	✓	✓	✓				✓
4 City of Goleta, San Jose Creek Capacity Improvement and Fish Passage Project			✓	✓	✓	✓	✓
5 CCWA, Water Supply Reliability and Infrastructure Improvement Project	✓		✓	✓			
6 Goleta Sanitary District, Wastewater Treatment Plant Upgrade	✓	✓	✓	✓		✓	✓
7 City of Guadalupe, Recycled Water Feasibility Study	✓	✓	✓			✓	✓

Several projects meet a critical water supply or water quality need of a DAC in the region. Exhibit 11-3 lists the projects and how they assist in meeting critical water supply and water quality needs.

EXHIBIT 11-3

DAC Projects that meet Critical Water Supply or Quality Need

DAC Project	Meeting Critical Water Supply or Quality Need
1 City of Lompoc, Lompoc Valley Leak Detection and Repair Project	Lompoc, a DAC, relies heavily on groundwater for water supply needs. It is imperative that this source of supply be used judiciously and that the Lompoc Groundwater Basin not be overdrafted. Keeping water rates low is also important. This Project will save Lompoc 43 AFY at an annual cost of \$37,797.
2 City of Santa Maria, Untreated Water Landscape Irrigation Project	Santa Maria has limited access to SWP water (less than 20% of total water used is SWP water). The rest of the water supply is groundwater contaminated by a high level of nitrates. Importing SWP water and treating groundwater for potable use is very expensive—costs that this low-income community needs to avoid.
3 City of Santa Maria, LeakWatch Project	Santa Maria relies on both groundwater and a limited supply of imported water. It is imperative that these supplies be used judiciously and that the groundwater basin not be overdrafted. Leak detection and repair will help preserve these resources, keep costs down for rate payers, and help drought-proof the subregion.
4 City of Goleta, San Jose Creek Capacity Improvement and Fish Passage Project	The Old Town Goleta area has been repeatedly damaged by overflows from San Jose Creek during flooding events. Project 4 is needed to reduce or eliminate the threat to public safety and property as a result of flooding events.
7 City of Guadalupe, Recycled Water Feasibility Study	Guadalupe has limited access to imported SWP water and limited groundwater supply. The development of infrastructure to deliver reclaimed water to customers is essential to enabling the City to meet the growing water supply needs, which can only be realized upon completion of Project 7.

Certainty That Proposal Will Meet Program Preferences

There are several factors that give assurance that the projects in the Proposal will meet the Program Preferences. All projects were developed over many years and have undergone multiple levels of internal agency or city review and scrutiny. These high priority projects were also vetted during the Prop 84 project selection process, giving the Regional Water Management Group (RWMG) over 7 months to evaluate and select the best of the best. The County of Santa Barbara, as the responsible agency, dedicated countless hours to the selection process to assure that each project could be successfully integrated and executed for the benefit the entire region.

During this project selection process, each project underwent a high level of scrutiny. The projects were selected based on criteria designed to assure that the projects met

Prop 84 Guidelines and achieved regional IRWM Plan objectives. The details of the project selection process follow.

Project Selection Process

The criteria used to evaluate each project included:

- **Technical Feasibility** - A feasibility study, engineers cost estimate, budget, and schedule was required.
- **Ready-to-Go** - A review of whether the project would be ready for implementation by June 2011, including an approved plan, California Environmental Quality Act (CEQA)/ National Environmental Policy Act (NEPA) process close to completion, complete design, and no barriers to completion of permitting.
- **Matching Funds** - Matching funds from sponsoring agency were required.
- **Quantifiable Benefits** - Benefits were measured and quantified to assure that they would be achieved. Benefits included reducing water demand, increasing water supplies, improving water supply reliability, improving water quality, providing specific benefits to DACs, integration between multiple agencies, combating climate change, improving resource stewardship, and flood management.
- **Value-Cost Ratio** - The value-cost ratio of each project was established.

All projects in this Proposal are technically feasible, ready-to-go, have local match funding in place, and provide benefits that will be achieved. All projects have performance measures that quantify and verify project performance. A monitoring system or approach has been established for each project. Finally, each project will collect and analyze data that will be used to monitor performance in meeting goals and objectives of the IRWM Plan.

Existing Data and Studies

Technical feasibility is a particularly important criterion providing certainty that the projects will meet Program Preferences. Exhibit 11-4 sites existing data and studies that provide assurance that the projects are technically sound and highly likely to be implemented. Please refer to Appendix 3-1 for additional information on the studies cited below; internet links are included where available.

EXHIBIT 11-4

Data and Studies Supporting Project Feasibility and Technical Methods

Project	Existing Data and Studies
1 City of Lompoc, Lompoc Valley Leak Detection and Repair Project	<ul style="list-style-type: none"> ▪ "Ohio Leak Detection Study: Canton, OH" surveyed approximately 280 miles of water mains and found 80 leaks – estimated reduction of 773,520 gpd from identified leaks; Erie County, OH surveyed 200 miles of water mains and located 36 leaks – reduction of 350,000 gpd. ("Water Loss – A Business Case for Action", Bouman, Bernie, PE, and Dan Barr, PE, Burgess & Niple, pp. 36-38) ▪ The CUWCC encourages water loss control as an important part of water conservation. CUWCC's best management practices state that "Agencies shall locate and repair unreported leaks to the extent cost effective." (1. Utility Operations Programs, 1.2 Water Loss Control, C.6 provides details: http://www.cuwcc.org/mou/bmp1-utility-operations-programs.aspx) ▪ The EPA reports that a water loss control program can help to address conservation. (Review Draft Control and Mitigation of Drinking Water Losses in Distribution Systems [EPA 816-D-09-001], November 2009, pg. 1-2, http://www.epa.gov/safewater/pws/pdfs/analysis_wa-03_water_loss_doc_final_draft_v62.pdf) ▪ DWR has determined that "An effective way to conserve water is to detect and repair leaks in municipal water systems." (Water Conservation Guidebook No. 5: Water Audit and Leak Detection, June 1992, pg. iii)
2 City of Santa Maria, Untreated Water Landscape Irrigation Project	<ul style="list-style-type: none"> ▪ The first phase has been completed, demonstrating the Project's feasibility. Simas Basin and Elks Field have already been converted to the Untreated Water Landscape Irrigation system, which has replaced 20 AFY of water from the domestic supply with groundwater supply. ▪ The Report to the City Council of the City of Santa Maria, entitled "Long Term Water Management Plan", Water Advisory Committee, February 1991, established the need for an extended water supply or groundwater demineralization. ▪ A TM demonstrated the feasibility of groundwater demineralization. ("Santa Maria Water Treatment Technology Evaluation", CH2M HILL, April 22, 2008) ▪ A report evaluated various options for addressing concentrate disposal. Extension of the secondary system provides for the most feasible way to defer costs of a new treatment facility. ("Evaluation of Groundwater Treatment Reverse Osmosis Concentrate Disposal", CH2M HILL, August 2009). ▪ The Project is consistent with the City's General Plan as it helps the City maintain the water quality goal of a hardness of less than 300 mg/L and TDS of less than 500 mg/L.
3 City of Santa Maria, LeakWatch Project	<ul style="list-style-type: none"> ▪ The City conducted an Initial Analysis showing that it would receive a full return on investment of converting to an AMI within a few years. ▪ The City commissioned a "FlexNet Propagation Analysis" from Sensus Metering Systems to determine the feasibility of the Project. ▪ The City performed an analysis of cost estimates received. ▪ The Sensus FlexNet System hardware and software is already installed in sections of the City (Phase I and II) and is performing well within Sensus specifications. Sensus FlexNet System has already been successfully installed in four other California cities (Redwood City, Foster City, Los Banos, and Woodland), as well as one water agency and Eastern MWD. ▪ Pilot Program testing confirmed transmitters can communicate through metal meter box lids.

EXHIBIT 11-4

Data and Studies Supporting Project Feasibility and Technical Methods

Project	Existing Data and Studies
4 City of Goleta, San Jose Creek Capacity Improvement and Fish Passage Project	<ul style="list-style-type: none"> ▪ A TM on design, "Geotechnical Findings and Recommendations for Type Selection for the San Jose Creek Capacity Improvement Project, Goleta, California," Bengal Engineering, Inc. ▪ HEC-RAS models – Simulates the flow of water within the channel including the construction materials, slope, and flow regimes. The HEC-RAS model was used to validate Project design. (San Jose Creek Channel Improvement Project, March 5, 2010) ▪ San Jose Creek Channel Improvement Project Physical Model Study – A physical model was constructed and test runs conducted to evaluate proposed fish passage and flood capacity improvements. (Northwest Hydraulic Consultants, Vancouver, BC, November 4, 2010) ▪ Computer modeling regarding flow regimes for fish passage channel and sediment transport through the channel.
5 CCWA, Water Supply Reliability and Infrastructure Improvement Project	<ul style="list-style-type: none"> ▪ Proposals from Cardno ENTRIX to coordinate permitting and AECOM for conceptual design, topographical survey, geotechnical investigation, detailed design, construction documents, and construction services. ▪ CCWA memo to the Board of Directors, Operations Manager and Engineer on October 1, 2010. A complete description of this memo is outlined in Subtask 1.1.5 in the Work Plan Outline section. ▪ The biological survey of the Project area was conducted in May and June 2009. A report documenting the surveys was issued by SAIC in August 2009. ▪ April 2010 TM prepared by AECOM identifying several repair alternatives.
6 Goleta Sanitary District, Wastewater Treatment Plant Upgrade	<ul style="list-style-type: none"> ▪ Facilities Planning Study, June 2008. ▪ Goleta Sanitary District – Financial Plan/Revenue Program. Prepared September 1995; updated annually. ▪ Goleta Water District (GWD) – 2005 UWMP. (the GWD UWMP applies because GSD is not an urban water supplier). 2010 UWMP is underway. ▪ Extended Phase 1 Archaeological Investigation, April 2009. ▪ Native American Consultation, April 2009. ▪ Value Engineering Study, May 2009. ▪ Geohazard Assessment/Soil Engineering Report, June 2009. ▪ Fault Investigation Report, August 2009. ▪ Compaction Test Report, July 2009. ▪ Health Risk Assessment, September 2009. ▪ Mitigated Negative Declaration, September 2009.
7 City of Guadalupe, Recycled Water Feasibility Study	<ul style="list-style-type: none"> ▪ Recycled Water Feasibility Study Scope of Work. Prepared by Dudek, February 2010. ▪ TM 1 – Conceptual Design Report – City of Guadalupe Wastewater Treatment Plant. Prepared by Dudek, May 2010. ▪ TM 2 – Basis of Design – City of Guadalupe – WWTP. Prepared by Dudek, August 2010. ▪ Guadalupe Wastewater Treatment Plant Study, Final Report, Black & Veatch, June 2007. ▪ City of Guadalupe Water Master Plan, December 2001.

EXHIBIT 11-4

Data and Studies Supporting Project Feasibility and Technical Methods

AMI = Advanced Metering Infrastructure (AMI)

CUWCC = California Urban Water Conservation Council

EPA = U.S. Environmental Protection Agency

mg/L = milligram per liter

MWD = Municipal Water District

TDS = total dissolved solids

TM = technical memorandum

UWMP = Urban Water Management Plan

WWTP = Wastewater Treatment Plant

Breadth and Magnitude To Which Program Preferences Will Be Met

The breadth and magnitude to which the Program Preferences will be met can be gauged by the degree to which the projects meet the IRWM Plan objectives. The IRWM Plan articulated six objectives that will be used to organize the breadth and magnitude to which Program Preferences will be met, demonstrated by the quantitative and qualitative information provided in Exhibit 11-5.

The objectives of the Santa Barbara County Region IRWM Plan are as follows:

- **Reduce Water Demand** – Increase water reuse and water conservation measures to increase and extend existing water supplies
- **Improve Operational Efficiency** – Improve operational efficiency, transfers, and supply reliability
- **Increase Water Supply** – Increase water supply in the least costly, most efficient, and most reliable manner and improve management of groundwater basins through conjunctive use
- **Improve Flood Management** – Improve flood management to protect people, property, and ecosystems
- **Improve Water Quality** – Improve quality of groundwater, stormwater runoff, agricultural water runoff, and treated water discharges to regional water bodies
- **Practice Resource Stewardship** – Improve water management to protect and restore ecosystems and wildlife habitat

Exhibit 11-5 provides both quantitative and qualitative data on the breadth and magnitude to which the projects meet the IRWM Plan objectives.

EXHIBIT 11-5

Breadth and Magnitude to Which Objectives Are Achieved

Project	Breadth/Magnitude to Which Objectives Are Achieved					
	 Reduce Water Demand	 Increase Operational Efficiency	 Increase Water Supply	 Improve Flood Management	 Improve Water Quality	 Practice Resource Stewardship
1 City of Lompoc, Lompoc Valley Leak Detection and Repair Project	Conserves average of 213 AFY in 3 service areas	Avoids lifetime pumping, treatment, and distribution costs (\$1,142,380); reduces carbon dioxide emissions by 63,000 pounds/year	Saves 213 AFY of groundwater			
2 City of Santa Maria, Untreated Water Landscape Irrigation Project	Avoids purchase of 80 AFY from the SWP (when allocations are below 50%)	Avoids lifetime pumping and supply costs (\$408,193) and treatment costs (\$46,228); also applies groundwater to 122 acres, matching water quality with water use	160 AFY of potable supply replaced with low-quality groundwater		Reduces TDS in the water delivery system by 2 mg/L; reduces fertilizer application by 4,176 pounds/year.	
3 City of Santa Maria, LeakWatch Project	Reduces leaks up to 210 AFY; reduces per capita use 2 gpd	Avoids lifetime pumping and supply costs (\$405,549), treatment costs (\$42,758), and staffing costs (\$930,089).	Saves 210 AFY -less expensive than treating groundwater or importing water		Reduce TDS by 1 mg/L in the water delivery system	
4 City of Goleta, San Jose Creek Capacity Improvement and Fish Passage Project			Increases groundwater supply through improved infiltration (8 AFY)	New channel will contain 105-year storm; removes 1,050 at-risk structural units, 5 auto dealerships, 0.5 miles of roadway at-risk from flooding, and 2.72 miles of roadway at-risk from accelerated depreciation from the flood plain; avoids expected emergency response costs (\$306,308) and lost net income (\$310,140)	Bacteria and nitrate levels reduced; contamination in Goleta Slough and Goleta Beach reduced	Removes barrier to fish passage to help restore 5.49 miles of spawning habitat for migrating steelhead

EXHIBIT 11-5

Breadth and Magnitude to Which Objectives Are Achieved

Project	Breadth/Magnitude to Which Objectives Are Achieved					
	 Reduce Water Demand	 Increase Operational Efficiency	 Increase Water Supply	 Improve Flood Management	 Improve Water Quality	 Practice Resource Stewardship
5 CCWA, Water Supply Reliability and Infrastructure Improvement Project		Prevents potential break in pipeline that supplies South Coast, preventing an extra 40 feet of exposed pipeline repair that would be required during a significant flow event	Saves 3,850 AF of expected water loss by avoiding potential break in pipeline			Repair encases pipeline so fish passage on creek channel no longer blocked
6 Goleta Sanitary District, Wastewater Treatment Plant Upgrade	Increases the secondary wastewater treatment capacity by 5 million gpd	Avoids lifetime operations costs (\$3,876,7670; reduces emissions of reactive organic compounds (0.04), nitrogen dioxide (1.71), sulfur dioxide (0.02), particulate matter less than 2.5 micrometers (0.14), and particulate matter less than 10 micrometers (0.14) in tons/year			Results in a net decrease in potential TDS discharge of 1,760 pounds per day and a decrease of 3,990 pounds per day of biochemical oxygen demand discharge	Higher-quality discharge protects marine habitat near Goleta Beach County Park
7 City of Guadalupe, Recycled Water Feasibility Study	Enables development of infrastructure to distribute recycled water (150 AFY)		Enables development of infrastructure to increase recycled water use (150 AFY)		Upgrade to tertiary treatment allows WWTP to meet Title 22 regulations and percolation into groundwater	