SBC IRWMP
Santa Barbara County

2013
Santa Barbara County
Integrated Regional Water Management Plan

December 2013

Highlights

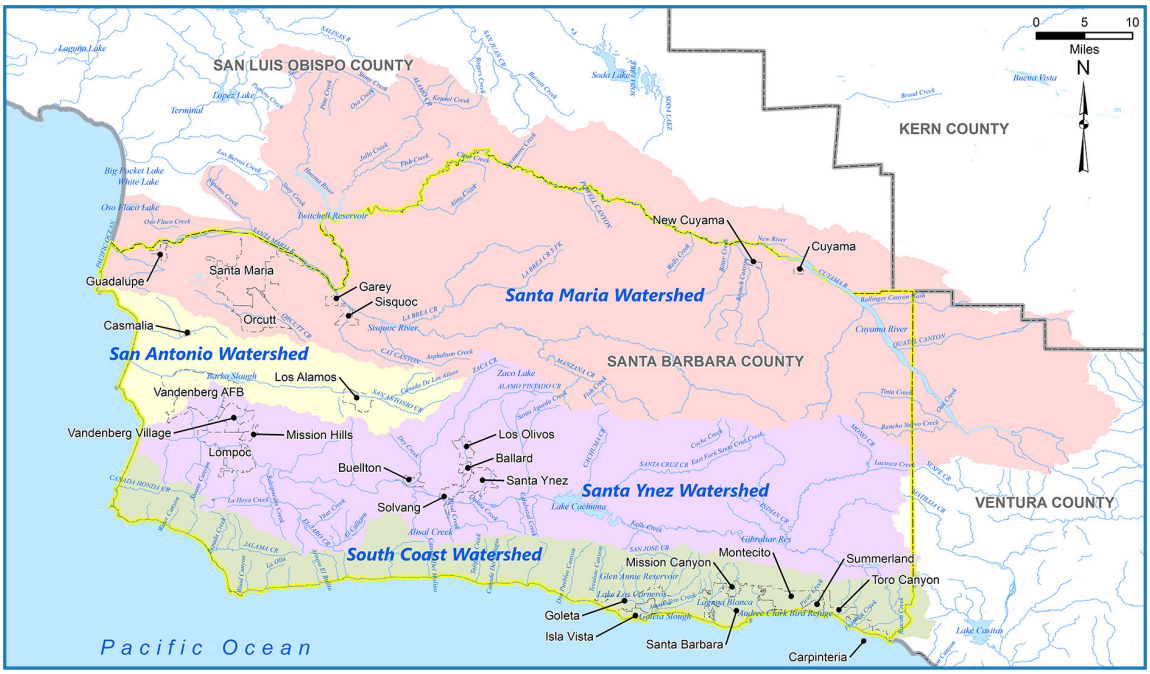
An electronic copy of this document and project information are available at www.countyofsb.org/pwd/irwmp.
For futher information, contact the Santa Barbara County Water Agency at 805.568.3440

Integrated Regional Water Management in the Santa Barbara Region

The Santa Barbara Integrated Regional Water Management (IRWM) Region is a geographically diverse area that is bounded by the Santa Maria River to the north, the Pacific Ocean to the west and south, Ventura County on its southeast, and Kern County to the northeast. The Region encompasses the entire County of Santa Barbara.

The Region includes an estimated population of 427,358 residents and spans approximately 2,740 square miles. It includes eight incorporated cities including Carpinteria, Santa Barbara, Goleta, Lompoc, Buellton, Solvang, Guadalupe and Santa Maria. In addition to the incorporated areas, the Santa Barbara Region has 21 different and distinct unincorporated communities and tremendous geographical diversity. The Region has four principal watersheds – the Santa Maria (including Cuyama and Sisquoc), San Antonio Creek, Santa Ynez River, and South Coast and features 100 miles of coastline. Elevations range from sea level to the highest peak of Big Pine Mountain at 6,828 feet with 215,000 acres of National Forest.

Integrated planning is not new to the Santa Barbara Region – local agencies have been working together for years to resolve multiple issues related to water and wastewater, including ensuring the adequacy of supplies and services, protecting and improving surface and groundwater quality, and protecting and enhancing ecosystems.



Historically, the Santa Barbara County boundary has framed interagency planning, development of shared water supplies, joint management of resources and operational systems for multiple purposes, and interagency adaptive management responses to changing circumstances. Significant integrated water resource projects have been developed as local agencies evaluated their service area needs, identified opportunities for addressing those needs, and successfully implemented projects with community support and cross-agency integration and coordination. These projects include the Cachuma Project, Twitchell Project, State Water Project, Goleta Valley Water Recycling Project, City of Santa Barbara Desalination Project, and interconnections between south, central and north County water districts.

The IRWM model now provides a forum that brings together diverse stakeholders from throughout the Region into a collaborative approach to water management. It offers the Santa Barbara Region an innovative way to develop long-term water supply reliability, improve water quality, and protect natural resources. The IRWM regional boundary serves the area well as coordination of salt and nutrient planning in the sub-region of Santa Maria Valley and recycled water development on the south coast was executed as part of this IRWM Plan 2013 with broad participation from stakeholders in each sub-region. Future regional opportunities for collaboration include salt and nutrient planning, agricultural water use efficiency, additional recycled water development, urban water use efficiency, habitat restoration, groundwater conjunctive use, optimizing availability of existing local storage, infrastructure interconnections, groundwater overdraft and quality, ocean water quality, surface water quality, fisheries management, low-impact development, and maximizing regional water supplies.

Collaborative Approach to Water Management in the Santa Barbara Region

2013 IRWM Plan

The statewide IRWM Grant Program, managed by the California Department of Water Resources, is supported by Proposition 50 (2002) and Proposition 84 (2006), both of which provide bond funding for competitive grants that improve water resource management.

IRWM Plans are regional plans designed to improve collaboration in water resources management and comprehensively address all aspects of water management and planning throughout an IRWM region. IRWM plans cross jurisdictional, watershed, and political boundaries; involve multiple agencies, stakeholders, individuals, and groups; and attempt to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions.

The Santa Barbara IRWM Program began in 2005, and since then has achieved remarkable success. Santa Barbara published its first IRWM Plan in 2007 and has received over $28 million to date in State grant funding.

Like the 2007 Plan, this IRWM Plan 2013 was prepared by the Santa Barbara County Cooperating Partners (the regional water management group), which is made up of water and sanitation/sanitary districts, community service districts, city departments, county departments, and a NGO. The Santa Barbara County Water Agency has served as the lead agency since 2005.

The IRWM Plan 2013 is a comprehensive update of the 2007 Plan. It builds upon local water and resource management plans from the Region, and was developed with input from an array of water management stakeholders. The Plan provides a mechanism for stakeholders to work together to collaborate on local water issues and challenges and effectively implement water management projects that achieve regional water management objectives. The Cooperating Partners Steering Committee and its working groups have performed focused activities that support various activities including the organization of the IRWM Plan and regional studies.

IRWM Program Accomplishments

The Santa Barbara County IRWM Program continues to evolve and adapt to changing conditions and meet regional needs. The following is a chronological outline of the major accomplishments of the Program.

2005 | First Organizational IRWM meetings are held with the County of Santa Barbara Water Agency and other interested water agencies and jurisdictions. The decision is made to draft the first IRWM Plan and apply for Prop 50 grant funding. The County Water Agency is designated as the lead agency.

2006 | The governance structure of the Santa Barbara County IRWM Region is established through a Memorandum of Understanding (MOU). The governance structure includes the Cooperating Partners, comprising the IRWM regional water management group, the Steering Committee, a sub-set of the Cooperating Partners, and the lead agency. Stakeholder outreach and participation becomes the hallmark of the planning effort.

2007 | Finalization and adoption of the 2007 IRWM Plan lays the groundwork for enhanced collaborative water resource projects by facilitating cooperation between public agencies, non-profit organizations, and public stakeholders in pursuit of IRWM grant funding.

2008 | DWR awards the Santa Barbara County IRWM Region $25 million to support 12 high-priority regional projects to be funded by Proposition 50.

2009 | The Region completes DWR's Regional Acceptance Process and receives formal approval of its governance structure and regional boundary. A new MOU streamlines the governance structure and includes NGOs as Cooperating Partners..

2010 | DWR awards the Santa Barbara IRWM Region a $500,000 grant to conduct stakeholder outreach, complete planning studies, and prepare the IRWM Plan 2013. The Region updates its governance MOU and conducts the first Biennial Review of the 2007 IRWM plan.

2011 | DWR awards Santa Barbara County $3,100,000 to fund seven high-priority projects under Proposition 84, Round 1. The Santa Barbara Region kicks off planning efforts to update the 2007 IRWM Plan including targeted outreach.

2012 | New Steering Committee members are in place to guide the Plan update process and members from the Cooperating Partners volunteer to serve on Plan update workgroups. The second Biennial Review is completed to update the regional project list and the MOU.

2013 | The South Coast Recycled Water Development Plan and the Santa Maria Valley Groundwater Assessment are completed by Steering Committee work groups as part of the IRWM Plan 2013. The Region submits a $5 million implementation grant application requesting funding for four high-priority projects.

2013 | The Santa Barbara Region completes the IRWM Plan 2013. The Plan will be reviewed and approved by DWR and adopted by Cooperating Partner member organizations in 2014.

IRWM Plan 2013 Objectives

Objective	Description
Protect, conserve, and augment water supplies 	Increase water supply reliability by maximizing the efficient use of existing sources, including recycled water; increasing urban and agricultural conservation; maximizing storage capacity of existing surface reservoirs, groundwater conjunctive use; strategically restoring or replacing and water infrastructure; and by developing new water sources.
Protect, manage, and increase groundwater supplies 	Develop programs and policies to increase groundwater recharge; implement regional and/or interagency conjunctive use and groundwater banking programs; and identify and address significant threats to groundwater resources from overdrafting.
Practice balanced natural resource stewardship 	Protect, restore, and enhance ecological processes, watersheds, riparian areas, and aquatic areas through water quality improvements and restoration efforts, including removal of invasive species and improved steelhead passage.
Protect and improve water quality 	Improve surface and ocean water quality by replacing septic systems with sanitary sewer connections, reducing the amount of urban runoff, and developing public education programs to increase awareness. Develop strategies to prevent groundwater contamination and improve groundwater quality. Identify and address drinking water quality problems.
Improve Flood Management 	Protect public safety by reducing the potential for flooding in strategic areas through infrastructure improvements such as levee reinforcements, channel modifications, floodplain restoration, and increased reservoir storage capacity through sedimentation removal.
Improve Emergency Preparedness 	Improve emergency planning and preparation to address potential impacts on water and wastewater facilities from floods, earthquakes, fires, and periodic droughts.
Maintain and Enhance Water and Wastewater Infrastructure Efficiency and Reliability 	Replace, rehabilitate, and upgrade infrastructure. Increase redundancy and capacity in storage and distribution systems to prepare the Region for water supply shortages during times of drought and emergencies. Remove sedimentation in surface water reservoirs to increase storage capacity.
Address Climate Change through Adaptation and Mitigation 	Encourage development of cost-effective carbon and other GHG-efficient strategies for water projects. Incorporate adaptation and mitigation strategies to respond to sea-level rise, rainfall variability, and temperature variability in infrastructure planning.
Ensure Equitable Distribution of Benefits 	Continue outreach to and support of disadvantaged communities in order to ensure an equitable distribution of benefits. Continue efforts to engage Native American Tribes in the regional IRWM process.

Significant Water Management Opportunities and Challenges Exist

Ensuring Long-Term Sustainability of Water Supply, Water Quality, and Water Resources

The region offers a terrain as diverse as it opportunities and challenges. While the Region is mostly hilly or mountainous, there is a large complement of valleys and plains. Much of the land is dedicated to ranching and agriculture. Approximately one-third of the land area is within the Los Padres National Forest from which watersheds provide an important water source for coastal populations, as well as important habitat for several threatened, endangered, proposed, candidate, and sensitive species. The Region has four principal watersheds – the Santa Maria (including Cuyama and Sisquoc), San Antonio Creek, Santa Ynez River, and South Coast.

Like other regions in the State, Santa Barbara County confronts challenges in ensuring the long-term sustainability and enhancement of its water supply, water quality, and watershed resources. On a watershed-specific basis, challenges evident in one location may be similar to issues in another area, but the most pressing water-related problems vary considerably from watershed to watershed. As a whole, the Region faces challenges including water supply reliability, water quality, natural habitat protection and restoration, disadvantaged community (DAC) infrastructure needs, and public safety impacts from flooding and other emergencies.

Water Supply Reliability

Groundwater, inland surface waters, imported water, and recycled water support a wide variety of water supply needs, recreational uses, and important ecosystems and habitats. Groundwater supplies the majority of all water used in the Region leaving it vulnerable to water supply shortages due to lack of water supply diversification.

Regional Projects Addressing Water Supply Reliability Include: Implementation of water use efficiency measures including extensions of recycled water systems, commercial and industrial water conservation programs, residential water audits, radio-read meter replacement, and agricultural irrigation system improvements; identification and repair of distribution system water losses; expansion of the capacity and redundancy of existing water storage and distribution facilities including reservoir sediment removal; augmentation of conjunctive groundwater management; upgrades to DAC infrastructure; use of untreated water for landscape irrigation; reduction of irrigation water use and runoff at schools, parks, and other high-traffic public facilities; infrastructure upgrades including interconnections and pipeline replacements; and increased stormwater capture.

Water Quality

Water quality is impacted by an array of challenges including stormwater and dry-weather runoff; wildfires that cause habitat damage and extreme erosion adversely affecting reservoir water quality; pollution from non-point sources; contamination from septic tanks; groundwater quality impacted by salts, nutrients, and industrial contaminants; and water supply constraints.

Regional Projects Addressing Water Quality Include: Treatment of agricultural tailwater; management and treatment of salts, nutrients, and other contaminants to improve groundwater quality; salt and nutrient plans; extension of sewers to neighborhoods with septic systems; low impact development (LID) projects; self-regenerating water softener rebate and replacement program; expansion of recycled water systems; upgrades at water treatment plants; treatment of stormwater; clean streets programs; stormwater treatment; reductions in nutrient, sediment and pathogen pollution to surface and groundwaters from equestrian facilities; package wastewater treatment plant; projects to increase groundwater recharge; and control of flooding and restoration creeks.

Habitat Protection

Habitat can be impacted by multiple challenges including wildfires, reduced stream flow, river or creek channelization, urban runoff, the increase in impervious surfaces and runoff, the influx of aggressive exotic species, increased creek/stream scouring, streamflow and groundwater diversion, water structures that create fish passage barriers, loss of wetlands, and water supply constraints can impede the health or reestablishment of endangered species.

Regional Projects Addressing Habitat Protection Include: Fish passage improvements; and steelhead improvements; creek lining and stabilization; riparian corridor and creek restoration; invasive plant removal; habitat enhancement; Steelhead recovery projects; regional habitat conservation bank for endangered species; trail restoration and educational displays; wetlands restoration; recreational projects that include habitat restoration and water quality features; and swale restoration project.

Improve Emergency Preparedness

Water resources planning in Santa Barbara County must consider the potential for service disruptions due to natural hazards such as earthquakes, fires, and floods, which can damage water and wastewater infrastructure. Additionally, the area experiences periodic droughts, which requires planning for shortages.

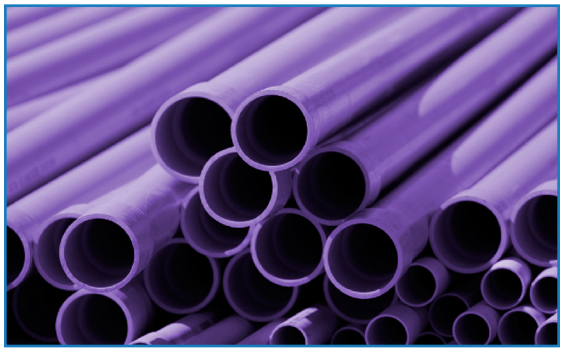
Regional Projects that Improve Emergency Preparedness Include: Multi-purpose flood control projects that also restore habitat; removal of sediment from reservoirs allowing more storage of flood waters; habitat protection and restoration projects; replanting and restoration of acreage damaged from wildfires to reduce erosion; maintenance of debris control structures and increase in channel capacity; infrastructure projects to assure adequate pressure and water for fire fighting; and water conservation programs to extend local surface water and conservation of groundwater; and supplemental imported supplies to cope with drought.

Water Supply

Water supplies include groundwater, surface water, imported State Water Project water, and recycled water; water supplies also are enhanced by the conjunctive use of surface and groundwater supplies and cloud seeding. The current average annual water supplies for Santa Barbara County total about 223,000 AFY, plus about 90,000 AFY in return flows to useable groundwater basins.

Groundwater basins are the major source of water in the County, supplying about 77 percent of Santa Barbara County's domestic, commercial, industrial, and agricultural water. Surface water reservoirs (Gibralter, Jameson Lake, and Lake Cachuma) provide approximately 65 percent of the south coast's water supply. Twitchell Reservoir is important to both the water supply and the flood protection of the Santa Maria Valley with the reservoir supplying about 32,000 AF of recharge to the Santa Maria Groundwater Basin on an average annual basis. Imported State Water Project water provides 39,078 acre-feet (Table A category) with a drought buffer allotment of 3,908 acre-feet. Goleta Water District holds an additional drought buffer of 2,500 acre-feet as capacity permits. Recycled water currently meets 4,177 acre-feet per year of demand.

Development and diversification of local water supplies is an important step in reducing the Region's reliance on imported supplies and mitigating the impacts of regulatory constraints and climate change. The IRWM Plan 2013 has set a target



of 7,035 AFY of recycled water use by 2035. Other strategies to maximize the use of local supplies include increasing stormwater capture, removal of sediment from surface water storage, regional collaboration for conjunctive groundwater management, and integration of existing infrastructure systems to optimize operational flexibility.

Water Quality

Groundwater quality in the Region varies depending upon the groundwater basin, basin sub-area, and overlying land uses. Slight increases in TDS have been recorded in many basins in the County; yet in other areas, TDS levels have remained stable and even decreased. Efforts to increase recharge and improve irrigation efficiency have been implemented to address this problem in some areas.

The County contains a number of non-sewered, fairly densely populated areas that remain on septic tanks, requiring integrated agency action to provide extensions of sewer systems to serve these areas or other measures to address potential groundwater contamination. State maximum contaminant levels (MCLs) for nitrates have been exceeded in some areas.

The State is seeking to improve groundwater quality through the Recycled Water Policy. The Recycled Water Policy requires that Salt and Nutrient Management Plans are to be completed by 2014 to facilitate basin-wide management of salts and nutrients in a manner that optimizes recycled water use while ensuring protection of groundwater supply and beneficial uses, agricultural beneficial uses, and human health.

Poor quality surface water in creeks, rivers, and oceans can result from pesticides, fertilizers, green waste, animal waste, human waste, petroleum hydrocarbons (gasoline, motor oil), trash, and other constituents. Project Clean Water, Santa Barbara County Public Works Department, works to meet Clean Water Act requirements for urban runoff and to protect the public health and enhance environmental quality in Santa Barbara County watersheds and beaches.

Storm Water Management Plans (required by the Clean Water Act and the National Pollutant Discharge Elimination System) are prepared to manage discharge of urban runoff to receiving waters. These plans summarize the management plans and strategies to maintain compliance in all applicable discharge and effluent prohibitions.

Agricultural sources may contribute to water quality impairments through irrigation return flow, flows from tile drains, and storm water runoff. These discharges can affect water quality by transporting pollutants including pesticides, sediment, nutrients, salts (including selenium and boron), pathogens, and heavy metals from

cultivated fields into surface waters. The Central Coast Regional Water Quality Control Board employs a regulatory process called a Conditional Waiver of Waste Discharge to control discharges from irrigated agricultural lands to protect surface water and groundwater quality.

Ocean water quality is of concern in Santa Barbara County. Scientific evidence has linked storm water runoff with high levels of indicator bacteria in creeks and ocean water to an increased health risk to humans. Sources of these indicator bacteria may include human and domestic or wild animal excrement, decomposing plant matter, and septic and sanitary sewer overflow. Investigations of the City of Santa Barbara sewer system, for example, have indicated that local sewer pipe leaks likely occur in some areas of the city, contributing untreated wastewater to the shallow groundwater zone that can eventually make its way to creeks and to the beaches. In addition, throughout the county, poorly placed septic systems on

beaches, near creeks, marshes and in areas of high groundwater have leached into creeks, marshes, groundwater, and the ocean. To address threats to ocean water quality, local environmental groups working with sanitary districts have converted four coastal neighborhoods from septic to sewer collection systems.

Regional Studies

During the development of the IRWM Plan 2013, two regional studies were completed by specially-convened workgroups. The studies were the South Coast Recycled Water Development Plan and the Santa Maria Valley Groundwater Assessment. Both planning documents address priority issues and move the region closer to effectively increasing the use of recycled water and developing salt and nutrient planning documents.

Disadvantaged Communities

Disadvantaged communities (DACs) are defined as communities with a Median Household Income (MHI) of 80% or less of the statewide MHI. DACs are found in areas of Santa Maria, Guadalupe, Casmalia, Orcutt, Lompoc, New Cuyama, and Cuyama. Often DACs lack the financial and technical resources to design, implement, operate, and maintain reliable water projects. The IRWM program has included significant outreach to DACs which has included assisting DACs in developing their own capacities and engaging them in an on-going water dialogue regarding their water experiences, challenges, concerns and ideas for solutions to obstacles. The IRWM Program has provided grant funding for project implementation in Guadalupe, Casmalia, Santa Maria, and Cuyama. Project development is underway in many of these areas.

Stakeholder Involvement is essential to the IRWM Program

Governance and Stakeholder Involvement

The governance structure of the IRWM Region was established in 2006 with a MOU and includes the Cooperating Partners as the regional water management group, the Steering Committee, which is a sub-set of the Cooperating Partners, and a lead agency. The governance structure maintains an open and flexible framework that provides for consistency, continuity, and leadership, while also being able to adapt to changes in a responsive and timely way. The County of Santa Barbara Water Agency has been the lead agency since 2005.

The Cooperating Partners is made up of water and sanitation/sanitary districts, community service districts, city departments, a county department, and a NGO and is the entity responsible for updating the existing 2007 plan. The Cooperating Partners are listed below.

The Steering Committee is the main decision making body in the IRWM structure and it acts as an open forum for the proposal and vetting of ideas. Any member of the Cooperating Partners may join the Steering Committee at any time by submitting a letter of intent. The Steering

Cooperating Partners Member Organizations

Carpinteria Sanitary District	Goleta West Sanitary District
Carpinteria Valley Water District	Heal the Ocean
Cachuma Operation Maintenance Board	La Cumbre Mutual Water Company
Cachuma Resource Conservation District	Los Alamos Community Services District
Casmalia Community Services District	Montecito Sanitary District
Central Coast Water Agency	Montecito Water District
City of Buellton	Santa Maria Valley Water Conservation District
City of Carpinteria	Santa Barbara County Agricultural Commissioner
City of Goleta	Santa Barbara County Flood Control
City of Guadalupe	Santa Barbara County Laguna Sanitation District
City of Lompoc	Santa Barbara County Parks
City of Santa Barbara	Santa Barbara County Water Agency
City of Santa Maria	Santa Maria Valley Water Conservation District
City of Solvang	Santa Ynez Community Services District
Cuyama Community Services District	Santa Ynez River Water Conservation District
Golden State Water Company	Santa Ynez River Water Conservation District, I.D. No. 1
Goleta Sanitary District	Summerland Sanitary District
Goleta Water District	Vandenberg Village Community Services District

Committee guided the development of the IRWM Plan 2013 with the lead agency manager serving as the single point of contact for the IRWM program and liaison between all entities involved in the program.

Working groups with guidance from the Steering Committee have performed focused activities that support various activities including the organization of the IRWM Plan and focused regional studies. The working groups for the IRWM Plan 2013 include:

- Recycled Water Development Plan Workgroup
- Salt and Nutrient Planning Workgroup
- Data Management Workgroup
- Climate Change Workgroup
- Objectives, Targets, and Projects Workgroup

Stakeholder outreach and participation has been the hallmark of the regional IRWM planning effort for over eight years. Regional stakeholders are all parties interested in the IRWM process. Stakeholders are diversified as outreach has been conducted to all types of water, wastewater, and flood control entities. Additional outreach has been successfully targeted at agricultural entities municipal and county governments, public utilities, Native American tribes, self-supplied water users (including agricultural, industrial, residential, park districts, school districts, colleges and universities), environmental organizations, community organizations, industry organizations, State, federal, and regional agencies or universities, and disadvantaged community members and representatives.

Each entity discussed above whether a Cooperating Partners or a stakeholder has the ability to attend IRWM meetings and make comments on the Plan sections as well as projects and the project selection process. All meeting notes and materials

Santa Barbara IRWM Program Organization

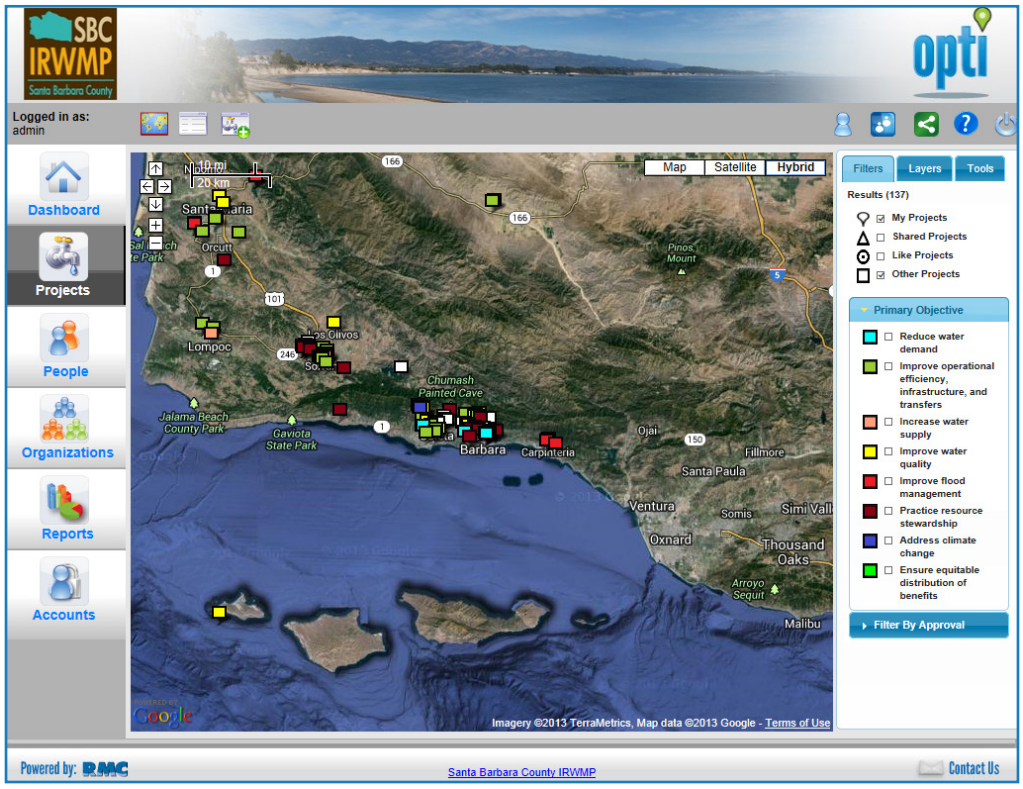
are available on the IRWM website *(http://www.countyofsb.org/irwmp/irwmp.aspx?id=39052)*. All Cooperating Partner meetings and workgroup meetings are open to the public providing any public stakeholder the opportunity to participate in the development of this plan and the implementation of the plan.

Development of a Regional Project Database

The Cooperating Partners' Steering Committee set up the web-based GIS-enabled Santa Barbara County IRWM Project Database (IRWM DMS) to collect, store, and disseminate project data to IRWM participants and stakeholders. The IRWM DMS can be accessed by any stakeholder at *http://irwm.rmcwater.com/sb/login.php*. Projects must be included in the regional database in order to be considered for IRWM grant funding.

Funding

IRWM planning positions the Region to secure outside funding critical to allowing the Region to implement much-needed water management projects and programs. An approved IRWM Plan is necessary for IRWM regions to secure funding under propositions 50, 84, and 1E and an asset when applying for funding outside of the IRWM program. The Region received $25 million in funding from Proposition 50 and over $3 million in additional IRWM-related bond funding. Projects funded through the IRWM process include recycled water, conservation, and infrastructure projects.

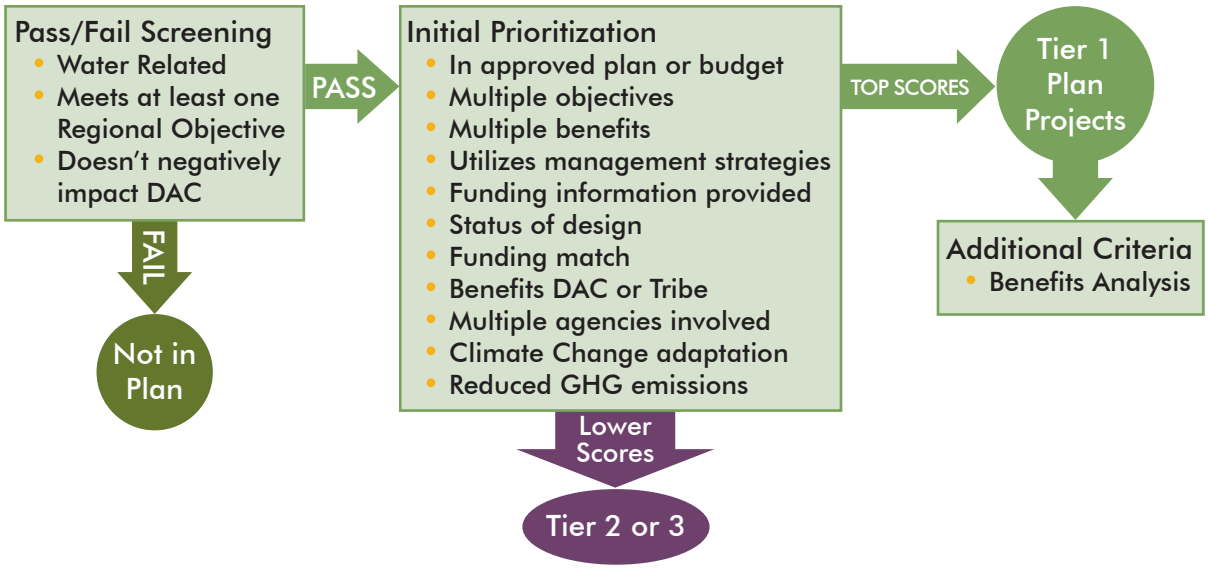


Santa Barbara County IRWM Project Data Management System

IRWM Planning Positions the Region to Secure Project Funding

Project Selection

Projects in the database were evaluated and prioritized by the Steering Committee in a multi-step process. The 2012 prioritization process required that a project be included in an approved plan and meet one or more regional objective and not negatively impact a DAC. Once a project passed the pass/fail screening, all projects were ranked based on how well they met key criteria. Highly ranked projects (Tier 1) met "initial prioritization" criteria list in the flow chart below.



Future of the Santa Barbara IRWM

In addition to identifying regional issues, objectives and targets, and priority projects, the IRWM Plan 2013 represents an important step in the long-term IRWM planning process. As this long-term IRWM process unfolds, multiple organizations and stakeholders from all watersheds supported by the IRWM governance structure will strive to construct mutually beneficial solutions that address regional issues and differing perspectives. The Santa Barbara IRWM program will aim to:

- Provide a forum for ongoing dialogue on water and watershed management throughout the Region
- Encourage strategic, sustainable, and integrated approaches to resolving water management challenges
- Collaborate on and implement integrated water management projects

The Santa Barbara IRWM Plan 2013 is a living document that will continue to evolve over time and adapt to changing circumstances. The Region stands to benefit into the future from the collaborative, problem-solving stakeholder-driven process established by the Integrated Regional Water Management process.

RMC

RMC Water and Environment
www.rmcwater.com