

7 Key Issues, Plan Objectives, Regional Priorities, and Water Management Strategies

IRWMP objectives and regional priorities were established by the Cooperating Partners to address the key issues requiring regionwide solutions, as well as those affecting individual watersheds. Water management strategies also were identified to be used in resolving those issues. While the explicit statement of these strategies is new, addressing them is not. Given ongoing efforts to meet identified local water supply, water quality, and environmental protection concerns, much has been accomplished over the past few decades. The focus of these efforts has been, and continues to be, ever-improving efficiency of water use, improving water treatment, attaining water quality standards, and enhancing habitats. Currently, for the purpose of seeking integrated regional water management funding from the state under Proposition 50, the Cooperating Partners decided that grant requests should focus on two major needs:

1. Meeting water quality objectives in the central and northern parts of the county to increase effluent reuse and improve quality of groundwater return flows and surface discharges
2. Meeting water supply efficiency and reliability in the southern part of the county

The relationship between regional objectives, priorities, strategies, and existing needs is discussed in this section.

7.1 Key Regionwide and Watershed-specific Issues

7.1.1 Overview

As described in Section 5, a number of existing plans, programs, and agreements have resulted in the effective management of many Santa Barbara water resources. However, areas of concern remain, particularly in relation to:

- The need to replace, rehabilitate, or upgrade aging infrastructure serving the general population and especially disadvantaged communities
- Risk of illness, especially in disadvantaged communities, from inadequate drinking water and pollution from wastewater
- Water supply reliability, stemming from multiple factors, including the variable reliability of State Water Project water, the loss of storage capacity in the four major reservoirs, and the need for water supplies to serve a growing population
- The need to operate and maintain water and wastewater systems in a manner that minimizes impacts to sensitive habitats and species and complies with federal, state, and local regulatory requirements

- Overdrafted groundwater basins in North County
- Water quality impairments in both groundwater and surface water bodies, including pollution of creeks and ocean water, especially from sediment runoff
- Potential harm to people and property from flooding
- The need for emergency planning to address potential impacts to water and wastewater facilities from floods, earthquakes, fires, as well as planning for (and responding to) periodic droughts

7.1.2 Regionwide Issues

The regionwide issues are consistent with the initiatives for ensuring reliable water supplies identified in the California Department of Water Resources (DWR) *California Water Plan 2005*; that is, implementing integrated regional water management and improving areawide water management systems.

The following describes those issues that are considered most critical to the entire region.

- **Emergency Response.** Water supplies or water quality could prove to be inadequate during emergencies. The ability to provide water service during severe emergencies (for example, earthquake, large wildfire, or extreme drought) may be reduced through damage to infrastructure or a shortage of supplies in a given area, resulting in potential adverse health and safety impacts.
- **Regionwide Water Management System.** Numerous challenges are inherent in managing a complex, integrated, regional water supply system that moves water from one end of the region to the other in order to meet community needs. Water supply reliability needs to be increased given limited and variable water supplies and periodic droughts.
- **Water Quality Standards.** Water management entities responsible for ensuring acceptable water quality for both public health protection and environmental stewardship must comply with increasingly stringent state and federal water quality requirements, including those for impaired water bodies, while also respecting property rights.

The current integrated regional water management commitment will extend for at least the next several years. As the planning process continues to meet the goals of efficient water utilization and improving water quality, it will remain viable and ongoing. In the short-term, the integrated regional water management process has identified the region's primary needs as more efficient water use through improved water and wastewater treatment in the northern and central portions of the county; and increased reliability and efficiency through conjunctive use and system flexibility in the southern portion.

7.1.3 Watershed-specific Issues

On a watershed-specific basis, water issues evident in one location may be similar or even identical to issues in another area, but the most pressing water-related problems vary considerably from watershed to watershed within the IRMWP planning region. The following issues are those currently considered to be the most important in each watershed.

These are also those of importance to the state as a whole, involving public health issues facing disadvantaged communities (DACs); public safety impacts from flooding, surface water (including ocean water) and groundwater quality impacts from point sources and nonpoint sources; environmental protection; water rights; water supplies; the need to comply with regulatory requirements; and water supply reliability.

Santa Maria River and Cuyama River

Public Health. The public faces risk of illness, especially in DACs, from inadequate drinking water and pollution from wastewater. A number of water bodies are impaired, and groundwater has elevated levels of nitrates in some areas.

Public Safety. People and property may experience potential harm from flooding.

Groundwater Overdraft. The Cuyama Groundwater Basin is in overdraft, causing increased pumping lift for agricultural users.

San Antonio Creek

Public Health and Environmental Protection. Sedimentation of creeks is a concern.

Groundwater Overdraft. The San Antonio Groundwater Basin is in overdraft, causing increased pumping lift for agricultural users.

Jalama Creek

Public Health and Environmental Protection. Surface water quality in Jalama Creek and the ocean may be affected as a result of saturation of the leach fields at Jalama Beach.

Santa Ynez River

Integrated Water Management. A State Water Resources Control Board (SWRCB) decision is needed on the Cachuma Project water rights permits that support those elements of the Cachuma Project Settlement Agreement under its jurisdiction to facilitate integration of water supply, downstream water rights, and public trust resources.

Water Supply Reliability. Issues include reliance on the Lompoc Uplands Groundwater Basin, in the face of growth, as a single water source; lack of diversity in viable water sources in City of Solvang; and water supply source management and interconnection between Santa Ynez River Water Conservation District Improvement District No. 1 and Solvang.

Public Health and Environmental Protection. Issues include the need to comply with emerging wastewater discharge standards; water quality problems in shallow groundwater in the Santa Ynez Uplands; and control of noxious weeds along the Santa Ynez River.

Groundwater Overdraft. Further study of the hydrology of the Lompoc groundwater basins is needed, especially as it relates to potential overdraft in the Santa Rita subbasin.

South Coast (Multiple Small Creek Watersheds)

Water Supply Reliability. Issues include difficulty meeting peak demands; aging infrastructure, which constrains system operability; and insufficient integration of adjacent systems.

Public Safety. People and property may experience potential harm from flooding.

Public Health and Environmental Protection. Pollution of creeks and coastal waters could result from nonpoint sources and point source runoff during rain events.

7.2 IRWMP Objectives

The IRWMP objectives described below were adopted by the Cooperating Partners and reflect those four minimally required by the state: water supply, groundwater management, ecosystem restoration, and water quality. These objectives were refined to more specifically describe how the objectives should be met in light of regional issues. The four mandatory objectives also were augmented by the Cooperating Partners to reflect regional needs. Emergency preparedness was added to reflect ongoing risks to the county from droughts, other water shortages, and emergencies such as earthquakes, floods, and fires. The Cooperating Partners' interest in emergency response also has been heightened by awareness of the Hurricane Katrina experience in New Orleans. Infrastructure efficiency and reliability also was added to address the need for the replacement and rehabilitation of water and wastewater infrastructure to increase its reliability and use water resources more efficiently. Such activities are essential to the delivery of adequate water and wastewater services within the county and often result in benefits to areas targeted by the state, including water supply, groundwater management, ecosystem restoration, and water quality. For example, distribution system upgrades can both improve water quality and reduce water loss, and thus the need for imported water supplies. This objective also is consistent with the California Water Plan Update 2005, which lists maintaining and improving statewide water management systems, including improving aging facilities, as one of the state's key initiatives.

The following are the regional objectives developed for this IRWMP; those with asterisks are required by the state. Emergency preparedness and infrastructure efficiency and reliability are objectives that were developed to reflect regional needs.

Water Supply*

Protect, conserve, and augment water supplies.

- Improve water supply reliability
- Improve system flexibility and efficiency
- Enhance local water supplies through groundwater recharge projects, conjunctive use of water supplies, water recycling, water conservation, water transfers, and precipitation enhancement
- Meet demands

- Optimize existing storage capacity
- Capture and manage runoff
- Match water quality to water use
- Desalinate seawater and brackish groundwater for reuse
- Ensure fire protection capacity
- Support appropriate recreational activities

Groundwater Management*

Protect current and future groundwater supplies.

- Promote sustainable groundwater use
- Utilize conjunctive use
- Implement groundwater banking
- Protect and improve groundwater quality
- Implement groundwater recharge projects

Ecosystem Restoration*

Protect and restore habitat and ecosystems.

- Protect, restore, and enhance natural processes and habitats
- Enhance recreational and educational opportunities

Water Quality*

Protect and improve groundwater, freshwater, brackish water, ocean water, and drinking water quality.

- Meet current and future state and federal water quality standards
- Improve the quality of urban runoff, storm water, and wastewater
- Reduce erosion and sedimentation
- Utilize seawater desalination as appropriate
- Protect public and aquatic ecosystem health
- Support appropriate recreational activities

Emergency Preparedness

Ensure secure water supplies by helping local water purveying districts address the impacts of future droughts, other water shortages, and emergencies such as earthquakes, floods, and fires.

- Implement groundwater banking and conjunctive use programs and needed facilities improvements
- Maintain infrastructure and operational flexibility
- Augment surface storage
- Implement flood control measures
- Ensure emergency drinking water availability

Infrastructure Efficiency and Reliability

Maintain and enhance water and wastewater infrastructure efficiency and reliability.

- Systematically and strategically rehabilitate and replace aging water and wastewater delivery and treatment facilities
- Ensure fire protection capacity

7.3 Regional Priorities

Short-term and long-term regional priorities were defined by the Cooperating Partners in order to provide more specific direction regarding the types of projects and programs that should be implemented to meet IRWMP objectives. Short-term priorities are those that are expected to be implemented within 5 years. Long-term priorities are those expected to be implemented after 5 years, *but the short-term priorities will continue to be important in the more distant future, as well; thus, there is overlap between short-term and long-term priorities.* The regional priorities are inherently integrative because they help meet regional objectives. For example, reducing the potential for flooding can involve water supplies, groundwater management, ecosystem restoration, water quality, emergency preparedness, and infrastructure efficiency and reliability, depending on the methods used.

These priorities are based on identified needs and anticipated future challenges. For example, some major facilities such as levees and regional distribution systems are over 50 years old and need to be upgraded or rebuilt. Other facilities are believed to be susceptible to substantial damage in seismic events, potentially leaving the area without adequate water supplies during the key emergency response period. These priorities reflect the need for “new” projects/initiatives. These do not reflect the substantial effort being made to meet ongoing public needs and protect the local environment. Those efforts are briefly described in Sections 2 through 5 and are assumed to continue. The short-term and long-term priorities described below are not listed in order of importance.

7.3.1 Short-term Priorities (5 years)

- Protect public safety by reducing the potential for flooding in strategic areas through infrastructure improvements such as levee reinforcement, channel modifications, floodplain restoration, and increasing reservoir storage capacity.
- Increase water supply reliability by developing new water sources; maximizing the efficient use of existing sources, including recycled water used for landscaping, irrigation, industrial and commercial purposes, desalinated water, conservation, and groundwater treatment; and strategically restoring or replacing water infrastructure.
- Strategically restore and replace wastewater infrastructure to improve wastewater quality, limit the potential for adverse impacts to water quality and sensitive environmental areas through accidental releases, increase wastewater management efficiency, and meet regulatory requirements.
- Ensure the adequacy of water and wastewater facilities in disadvantaged communities (Guadalupe, Cuyama, and Casmalia).
- Improve surface and ocean water quality and reduce beach closures by replacing septic systems with sanitary sewer connections, ensuring the integrity of wastewater collection systems near the ocean and surface water bodies, improving the quality of urban runoff, reducing the amount of urban runoff that enters the ocean and surface water bodies, and developing public education programs to increase awareness of the measures individuals can take to improve water quality.
- Further define sources of groundwater contamination and develop strategies to prevent groundwater contamination and improve groundwater quality in areas with known contamination.
- Protect, restore, and enhance ecological processes in aquatic areas through water quality improvements; public education; restoration efforts, including removal of invasive species; and improved steelhead passage on strategic creeks.
- Ensure the adequacy of water supplies during droughts and emergencies such as fires, floods, and earthquakes through strategic replacement and rehabilitation of critical infrastructure.
- Develop programs and policies to increase groundwater recharge or decrease groundwater use, especially in overdrafted groundwater basins.
- Encourage cooperation in beginning to develop groundwater banking programs.

7.3.2 Long-term Priorities (5 to 20 years)

- Provide adequate water and wastewater services to meet projected growth.
- Implement regional and/or interagency conjunctive use and groundwater banking programs where supported by legal decisions and landowners.
- Promote programs, policies, and infrastructures to increase water supply sustainability through artificial recharge of local groundwater basins.

- Maximize storage capacity of existing surface reservoirs.
- Optimize the use of seawater desalination to increase water supply reliability and offset groundwater use.
- Expand distribution systems to provide recycled water to new users.
- Expand voluntary water conservation programs for residential, commercial, industrial and agricultural uses.
- Continue interagency coordination to develop opportunities to further integrate the management of water and wastewater projects and programs.
- Continue to coordinate with adjacent counties to develop strategies and programs that improve the management of regional water resources.

7.4 Water Management Strategies

The state IRWMP Guidelines identify the following 20 potential water management strategies to be considered as methods to meet the objectives identified in Section 7.1. Those marked by an asterisk must be considered to meet the minimum IRWMP standards.

Ecosystem Restoration*	Water recycling*
Environmental and habitat protection and improvement*	Wetlands enhancement and creation*
Water Supply Reliability*	Conjunctive use
Flood management*	Desalination
Groundwater management*	Imported water
Recreation and public access*	Land use planning
Storm water capture and management*	Nonpoint source pollution control
Water conservation*	Surface storage
Water quality protection and improvement*	Watershed planning
	Water and wastewater treatment
	Water transfers

These strategies were considered by the Cooperating Partners, as were the 25 resource management strategies identified in the State of California Department of Water Resources (DWR) California Water Plan Update 2005. Those most applicable to Santa Barbara County needs are included in the IRWMP, including those that are mandatory. These represent strategies that are already being implemented through local planning processes, such as General Plans, Urban Water Management Plans, Capital Improvement Plans/Master Plans, Groundwater Management Plans, Drought/Conservation Plans, Storm Water Management Plans, and Operational Agreements, and those that will continue to be implemented through specific projects identified in Section 8 and Appendix C. The list of water management strategies included in the IRWMP, modified to reflect regional issues, is shown below; each strategy is followed by a brief discussion of some of the integrated benefits that could result from its use. The use of strategies with multiple benefits clearly increases water planning efficiency in a cost-effective manner.

Environmental and Habitat Protection and Improvement

- Ecosystem restoration
- Wetlands enhancement and creation
- Watershed planning

Integrated Benefits

As described in the California Water Plan Update 2005 (DWR, 2005), ecosystem restoration can “improve plant and animal life, increase diversity and connectivity of habitat, help endangered species, and improve watersheds. Restoration can rehabilitate natural processes to support native communities with minimal ongoing help. Restored habitats are likely to help sustain reproduction, foraging, shelter, and other needs of fish and wildlife species... As ecosystem restoration actions help increase the health and abundance of species protected under the state and federal Endangered Species Acts, there might be fewer Endangered Species Act conflicts. As ecosystems such as wetlands and sloughs are restored, their natural pollutant filtering capabilities can improve water quality. As floodplains and seasonal lakes and ponds are restored, groundwater recharge can increase. The result will be a more reliable, higher quality water supply supported by a sustainable ecosystem. The economic benefits that improved rivers, estuaries, wetlands, wildlife, beaches, and their surrounding habitats can have in the state may far exceed the investments for restoring ecosystems.” The California Water Plan Update 2005 continues, “Considering California lifestyle trends and travel and tourism as the major growth industry for the state, investments in ecosystem restoration actions may provide a high return on investment. Second only to the state’s beaches, rivers are the biggest attraction for California’s recreation industry. Similarly, managed wetlands and wildlife refuges provide bird watching and hunting opportunities that contribute hundreds of millions of dollars annually to California’s economy.”

Watershed management also results in multiple, integrated benefits through preserving ecological functions and processes while considering natural cycles (hydrologic, nutrient, and life cycles) when designing projects. The California Water Plan Update 2005 gives the following example: “elevated stream temperatures are often identified as a problem. Promoting groundwater accretion to streams and improving riparian cover often cools stream temperatures. Designing projects to allow more water to soak into the ground, less water to sheet off as runoff, protecting the soil surface from erosion by planting native plants, and stabilizing stream channels with vegetated buffers brings the stream more in line with the natural watershed cycles and sustains important ecological processes.”

In addition to ecological benefits, use of this strategy can reduce the potential for flooding through the restoration of floodplains, including the removal of invasive weeds that restrict flood flows. This strategy also can improve water quality by maintaining natural vegetated stream buffers that filter pollutants and nutrients. Restoration also can stabilize creek banks, reducing erosion and resulting water quality impacts. Ecological benefits also can result from improvements to wastewater infrastructure by reducing the potential for spills into sensitive habitats and water bodies. Santa Barbara County’s creeks discharge to the ocean, and impaired creek water quality also affects the water quality of the ocean in the vicinity of public beaches. Thus, improving creek water quality can improve ocean water quality and have recreational benefits. Restored ecosystems can have additional educational benefits by

enhancing opportunities for activities such as bird watching and informing the public of ecosystem restoration benefits.

Surface Water Management

- Flood protection and management
- Storage (storm water capture and management)
- Banking/conjunctive use
- Urban runoff management

Integrated Benefits

Flood protection and management and storage provide multiple benefits by reducing risks to life and property and enhancing natural resources. Twitchell Reservoir, for example, is managed for both flood protection and groundwater recharge; and other reservoirs are managed for multiple purposes as well, including water supply and ecological benefits.

The banking and conjunctive use of surface water resources increases the reliability of water supplies by using or banking surface water for later use during dry years when local water is not available. This strategy can reduce the demand for groundwater, allowing the replenishment of local water supplies, and it can improve groundwater quality by banking higher quality water, such as State Water Project water.

Urban runoff management, including nonpoint source pollution management, can improve water quality, which has ecological benefits (for example, benefits to wetlands and other important aquatic and terrestrial ecosystems), and it can improve recreational opportunities and health benefits by reducing beach closures. Furthermore, capturing storm water in appropriately designed detention basins and filter swales results in several beneficial functions; flood management by reducing storm flows, erosion and sedimentation control by slowing storm water runoff, and water quality improvement through the natural benefits of absorption and filtering and settling water. This strategy also can protect groundwater quality.

Groundwater Management

- Recharge area protection
- Conjunctive use
- Groundwater remediation and aquifer remediation

Integrated Benefits

The benefits of conjunctive use are described under Surface Water Management. Recharge area protection can have ecological benefits in addition to protecting groundwater supplies. Groundwater and aquifer remediation also have water quality, supply, and reliability benefits, and local groundwater supplies serve as a stable regional water supply during disaster recovery.

Imported Water

- Increase reliability

Integrated Benefits

Imported State Water Project water has increased the reliability of local supplies, but has variable reliability; other strategies, such as the use of recycled water and groundwater banking, are used to increase the reliability of State Water Project supplies. Banking State Water Project supplies can improve local groundwater quality.

Water Supply Reliability

- Conjunctive use
- Precipitation enhancement
- Water conservation
- Water transfers
- Sharing facilities to efficiently manage infrastructure
- Emergency drinking water availability

Integrated Benefits

Precipitation enhancement is used to increase surface water supplies, which can lead to increased groundwater recharge (for example, by increasing the amount of water stored in Twitchell Reservoir) and reduced reliance on groundwater in some areas. Water conservation reduces the need for additional imported supplies, increases water supply reliability, and minimizes the amount of water and wastewater treatment required. Water conservation also meets the state's goal of using state water resources more efficiently. Sharing facilities to efficiently manage infrastructure reduces the need for additional construction, which can have adverse environmental impacts (for example, impacts to air quality, biological resources, and cultural resources), as well as high costs. Emergency drinking water availability is of critical concern in Santa Barbara County due to its history of floods, fires, and earthquakes.

Drinking Water – Treatment and Distribution

Integrated Benefits

Ensuring the adequate treatment and distribution of water is an essential strategy that is critical to the health and well-being of all residents of Santa Barbara County.

Water Quality Protection and Improvement

Integrated Benefits

Water quality protection and improvement are discussed above under Environmental and Habitat Protection and Improvement, Surface Water Management, Groundwater Management, and Imported Water.

Matching Water Quality to Water Use

Integrated Benefits

This strategy would allow water to be used in an efficient manner (for example, by using recycled water to irrigate landscaping), which minimizes the need to develop new water supplies or use existing water supplies; it also potentially reduces the amount groundwater required for higher or more beneficial uses. This strategy also may reduce the amount of treatment needed. For example, by water matching quality for agricultural and in-stream uses, water treatment may be avoided. For drinking water, appropriately matching high quality source waters can reduce the levels of pollutants and pollutant precursors that cause health concerns in drinking water. Additionally, less costly treatment options can be used when water utilities start with higher quality source waters, and water supply reliability can be enhanced simultaneously.

Water Recycling – Treatment and Distribution

Integrated Benefits

Use of recycled water can provide multiple benefits (DWR, 2005), including:

- Providing a more reliable local water supply
- Providing organic matter for use in agricultural soil conditioning and allowing for a reduction in fertilizer use
- Reducing the discharge of pollutants to water bodies, beyond levels prescribed by regulations, and allowing more natural treatment by land application
- Providing a more secure water supply during drought periods
- Providing economic benefits resulting from a more reliable water supply
- Improving groundwater and surface water quality and contributing to wetland and marsh enhancement
- Providing energy savings (the use of recycled water as a local source may offset the need for more energy-intensive projects to import water)

Desalination

- Seawater
- Brackish
- Reuse

Integrated Benefits

Use of desalinated water could minimize the need for other surface and groundwater supplies; associated benefits are described under Surface Water Management and Groundwater Management. In addition to providing an increased, more diversified water supply in general, more high quality potable water would be available during droughts, which could protect public health.

Recreational Opportunities

Integrated Benefits

Enhancing recreational opportunities can occur through Environmental and Habitat Protection and Improvement, where improvements are specifically designed for that purpose and can be an additional benefit of managing urban runoff. (For example, ocean water quality could be improved, reducing the number of beach closures).

Water and Wastewater Treatment

Integrated Benefits

Ensuring adequate water and wastewater treatment is an essential strategy that is critical to the health and well-being of all residents of Santa Barbara County. Several of the wastewater treatment plants in the county produce recycled water, which offsets use of potable water sources. This increases water supply reliability, matches water supplies with the appropriate use, and potentially reduces the impacts that could result from using surface water and groundwater supplies. Treated effluent also can be used for ecosystem restoration purposes. Water treatment also can be used to enhance water supplies; for example, by treating groundwater that was otherwise not usable.

Economic Incentives

Integrated Benefits

Economic incentives can be used to encourage water conservation, which reduces the need for additional imported supplies, increases water supply reliability, and minimizes the amount of water and wastewater treatment required. Reducing water demands may create environmental or social benefits, and avoid or delay construction of new water supply projects, which would avoid any environmental impacts resulting from their construction.

7.5 Water Management Strategies and their Integration with Objectives and Regional Priorities

Tables 7-1 and 7-2 illustrate the integration between the IRWMP objectives, regional priorities, and water management strategies. Water management strategies that could be used to implement each regional priority are shown, as are the objectives that could be met by the use of these strategies to meet regional priorities, depending on the specific methods used.

TABLE 7-1
Integration of Water Management Strategies, Regional Priorities, and Objectives – Short-term Priorities (5 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Preparedness	Infra-structure Efficiency and Reliability
Short-term Priorities (5 years)							
Reduce the potential for flooding in strategic areas through infrastructure improvements such as levee reinforcement, channel modifications, floodplain restoration, and increasing reservoir storage capacity	Surface water management						
	Environmental and habitat protection and improvement	X	X	X	X	X	X
Increase water supply reliability by developing new water sources; maximizing the efficient use of existing sources, including recycled water used for landscaping, irrigation, industrial and commercial purposes, desalinated water, conservation, and groundwater treatment; and strategically restoring or replacing water infrastructure.	Watershed planning						
	Imported water/increase reliability						
	Water supply reliability						
	Drinking water—treatment and distribution						
	Water quality protection and improvement						
	Matching water quality to water use	X	X		X	X	X
	Water recycling—treatment and distribution						
Desalination							
Water treatment							
Economic incentives							

TABLE 7-1
Integration of Water Management Strategies, Regional Priorities, and Objectives – Short-term Priorities (5 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Preparedness	Infrastructure Efficiency and Reliability
Strategically restore and replace wastewater infrastructure to improve wastewater quality, limit the potential for adverse impacts to water quality and sensitive environmental areas through accidental releases, increase wastewater management efficiency, and meet regulatory requirements	Water and wastewater treatment Environmental and habitat protection and improvement Water quality protection and improvement	X	X	X	X	X	X
Ensure the adequacy of water and wastewater facilities in disadvantaged communities (Guadalupe, Cuyama, and Casmalia)	Water and wastewater treatment Drinking water -- treatment and distribution Water supply reliability	X	X		X	X	X
Improve surface and ocean water quality and reduce beach closures by replacing septic systems with sanitary sewer connections, ensuring the integrity of wastewater collection systems near the ocean and surface water bodies, improving the quality of urban runoff, reducing the amount of urban runoff that enters the ocean and surface water bodies, and developing public education programs to increase awareness of the measures individuals can take to improve water quality	Environmental and habitat protection and improvement Surface water management Water quality protection and improvement Recreational opportunities Watershed planning	X		X	X		X

TABLE 7-1
Integration of Water Management Strategies, Regional Priorities, and Objectives – Short-term Priorities (5 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Prepared-ness	Infra-structure Efficiency and Reliability
Further define sources of groundwater contamination and develop strategies to prevent groundwater contamination and improve groundwater quality in areas with known contamination	Groundwater management Water quality protection and improvement Imported water	X	X		X		
Protect, restore, and enhance ecological processes in aquatic areas through water quality improvements; public education; restoration efforts, including removal of invasive species; and improved steelhead passage on strategic creeks	Environmental and habitat protection and improvement Surface water management Water quality protection and improvement	X		X	X		
Ensure the adequacy of water supplies during emergencies such as fires, floods, and earthquakes and during droughts through strategic replacement and rehabilitation of critical infrastructure.	Water supply reliability Water and wastewater treatment	X			X	X	X
Develop programs and policies to increase groundwater recharge or decrease groundwater use, especially in overdrafted groundwater basins	Groundwater management Imported water Water supply reliability Matching water quality to water use Water recycling	X	X		X		

TABLE 7-1
Integration of Water Management Strategies, Regional Priorities, and Objectives – Short-term Priorities (5 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Prepared-ness	Infra-structure Efficiency and Reliability
Encourage inter-agency cooperation in beginning to develop groundwater banking programs	Surface water management						
	Groundwater management						
	Water supply reliability	X	X		X		
	Imported water						
	Desalination						

TABLE 7-2

Integration of Water Management Strategies, Regional Priorities, and Objectives – Long-term Priorities (5 to 20 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Preparedness	Infrastructure Efficiency and Reliability
Long-term Priorities (5 to 20 years)							
Provide adequate water and wastewater services to meet projected growth	Surface water management						
	Groundwater management						
	Imported water	X				X	X
	Water supply reliability						
Implement regional and/or interagency conjunctive use and groundwater banking programs where supported by water cases and landowners	Surface water management						
	Groundwater management						
	Water supply reliability	X	X		X	X	X
	Imported water						
Promote programs, policies, and infrastructures to increase water supply sustainability through artificial recharge of local groundwater basins	Desalination						
	Surface water management						
	Groundwater management						
	Water supply reliability	X	X		X	X	X
Maximize storage capacity of existing surface reservoirs	Imported water						
	Desalination						
	Surface water management						
		X	X				X

TABLE 7-2
Integration of Water Management Strategies, Regional Priorities, and Objectives – Long-term Priorities (5 to 20 Years)

Regional Priorities	Water Management Strategies Used	Objectives Met					
		Water Supply	Ground-water Management	Eco-system Restoration	Water Quality	Emergency Preparedness	Infra-structure Efficiency and Reliability
Optimize the use of seawater desalination to increase water supply reliability and offset groundwater use	Surface water management						
	Groundwater management						
	Water supply reliability	X	X				X
	Imported water						
	Desalination						
Expand distribution systems to provide recycled water to new users	Recycled water—treatment and distribution	X	X				X
	Matching water quality to water use						
Expand voluntary water conservation programs for residential, commercial, industrial and agricultural uses	Water supply reliability	X	X				
	Economic incentives						
Continue inter-agency coordination to develop opportunities to further integrate the management of water and wastewater projects and programs	All strategies could be involved	X	X		X	X	X
Continue to coordinate with adjacent counties to develop strategies and programs that improve the management of regional water resources	All strategies could be involved	X	X	X	X		