

Appendix C:
Descriptions of Potential Projects

TABLE C-1**Santa Barbara County IRWMP - Tier I Projects Sorted by Watershed**

Watershed	Sponsor	Project	Project Description
All	Southern SLO and Santa Barbara Counties Ag Watershed Coalition	Santa Maria River/Oso Flaco, Santa Ynez River, and South Coast Beaches TMDLs Watershed Working Groups	This project will fund seed money to form watershed working groups for the lower Santa Maria River/Oso Flaco Waterbodies, Santa Ynez River and the South Coast Beaches for the express purpose of managing the TMDL process in these watersheds. Fecal coliform, nitrate, ammonia TMDLs for Santa Maria River Oso Flaco are in progress. Also, the following TMDLs are being investigated: Santa Barbara County Beaches Bacteria, Santa Maria River Pesticides and Santa Ynez River Nutrients. All of the above named TMDLs are scheduled to occur in the next 3-8 years. All TMDLs will require a substantial investment of resources from a variety of agencies, special districts, irrigated agriculture, ranchers and the general public. TMDLs have the potential to become controversial. Generally, the more controversial and contentious, the more expensive the process. Watershed working groups have the potential to create a collaborative approach to solve a specific set of problems as well enable disparate interests to formally chart a strategic course.
All	Water Purveyors and the County Water Agency	Regional Water Conservation Rebates, Incentives, and Promotion	Includes ongoing operation of the City's state-of-the-art water conservation program. The program aims to generate water savings at least sufficient to offset demand from new connections, and achieve actual reduction in overall demand as well. Program elements include inclining block rates, water recycling, free water checkups for City water customers, several advanced programs for weather-based irrigation efficiency, targeted conservation measures and rebates for commercial customers, ongoing educational presentations at schools and youth camps, and a broad public information effort consisting of brochures, web sites, advertising, free video programs, and training for landscape professionals. Current demand is below 14,000 AFY compared to demand of 16,300 in 1988 when the current program began to be developed.
Cuyama	Cuyama Community Services District	Wastewater Treatment Plant Effluent Disposal Project	Two percolating ponds will be installed for effluent disposal.
Cuyama	Cuyama Community Services District	Water Tower Repair Project	The elevated water tower, which stands 100 feet tall, requires complete repair to the interior and additional repair to the exterior for its operation to continue. Cleaning and coating will be done, and new electric pump controls will be installed.
Jalama	Santa Barbara County Parks	Jalama Beach County Park Septic System Improvements	Replace undersized septic tanks at 8 locations within Jalama Beach County Park.
Santa Maria	Casmalia Community Services District	Casmalia Water System Improvements	The town of Casmalia uses a well located approximately 4.5 miles north of the town off Black Road just north of Highway 1. The project involves the design and construction for replacement of water pipelines and tank facilities to replace deficient infrastructure, upgrading electrical building and facilities to comply with code requirements, and improvements to the existing well facility. The service connections will also be upgraded or replaced.
Santa Maria	City of Guadalupe	Guadalupe WWTP Reuse Improvements	Project will consist of 1) treatment improvements, 2) new effluent transfer capabilities, and 3) potential improvements at a 20 acre wetland site located within City limits. Treatment improvements will consist of alterations to the lagoon treatment process to limit effluent total suspended solids caused by algae growth. These improvements are currently under study, but may include headworks improvements, increased lagoon mixing, a chemically enhanced settling process, or lagoon covers. New effluent disinfection capability will be accomplished using either sodium hypochlorite chlorination, or UV disinfection. Effluent transfer capabilities will include piping and valve improvements to the existing effluent discharge location, and a new transfer pump station and approximately 3 miles of new pipeline routed to the wetland site. Improvements at the wetland site are being studied, but may include flow control structures and enhancements for public use.

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Santa Maria	City of Santa Maria	Wastewater Treatment Plant Expansion	Revision to the current permit to allow for greater permitted flow (12.5 mgd), environmental review and completion of the expanded preliminary and final facility design, in order to begin construction in 2008. The project also includes a new wastewater SCADA system. The project will begin in 2008 and be completed in 2010. Facilities envisioned for construction include, but are not limited to: new ponds for sludge drying and percolation, augmented pretreatment facilities, a new primary clarifier and trickling filter, standby power equipment, an updated telemetry system, and rehabilitation/reconstruction of infrastructure using outdated technology.
Santa Maria	Laguna County Sanitation District	Wastewater Reclamation Plant Upgrade	Plant capacity improvements and upgrades to facilitate treatment of wastewater and discharge of recycled water. The proposed improvements will expand capacity by adding additional tertiary treatment and disinfection processes as well as new discharge distribution facilities.
Santa Maria	Santa Barbara County Flood Control District	Santa Maria River Levee Reinforcement	The first phase would place a sheetpile wall, or other alternative, along the length of the Santa Maria River Levee between Suey Crossing and US Hwy 101, a distance of approximately 3,300 feet.
Santa Ynez	Santa Ynez River Water Conservation District, Improvement District #1	Gallery Well Filtration Facility	Includes construction of a filtration facility designed to produce a capacity of 1MGD approximately matching the production of an existing Gallery Well. The proposed facility will allow the District to provide potable water to its customers from a well th
Santa Ynez	Agricultural Commissioner's Office DBA Santa Barbara County Weed Management Area	Santa Ynez River Arundo Eradication Project	Arundo donax and Tamariz spp. are noxious weeds that are detrimental to habitat, water conservation and increase the risk of flooding and erosion in riparian systems. Both are limited in distribution on the Santa Ynez River, especially in comparison to other riparian systems in Santa Barbara County and California. This project aims to define the problem on the Santa Ynez River and eradicate both species from the riparian corridor.
Santa Ynez	Cachuma Conservation Release Board / Santa Ynez River Water Conservation District	Quiota Creek, Fish Passage Enhancements	Improvement of endangered steelhead passage on Quiota Creek by replacing two temporary bridges on Refugio Road that have damaged low flow (Arizona) crossings below, with prefabricated bridges that span the entire creek and re-grade the stream channel to restore natural conditions. This project is part of a broader watershed-scale planning effort that encompasses a comprehensive analysis of nine low flow passage impediments on Quiota Creek and proposed alternatives for each crossing considering passage flows, migration barriers, design criteria, and cost.
Santa Ynez	Vandenberg Village Community Services District	Lompoc Regional Wastewater	Upgrade the Lompoc Regional Wastewater Reclamation Plant (LRWRP) to improve reliability and meet new, more stringent discharge requirements. Upgrade treatment level from secondary to tertiary (including nutrient removal). Construct two new oxidation ditches and three new secondary clarifiers. Replace influent pumping station and sludge thickening equipment. Replace the current chemical disinfection system with an ultraviolet disinfection system. Install a new supervisory control and data acquisition (SCADA) system.
South Coast	Cachuma Operation and Maintenance Board	South Coast Conduit 2nd Pipeline - Upper Reach	The 2nd Pipeline Project will improve the reliability, integrity, and capacity of the South Coast Conduit (SCC). This project consists of the installation of 7800 feet of 48-inch pipe running parallel to the existing 48-inch SCC and connecting the three control structures in this reach. This second pipeline will allow maintenance of the original pipeline, create redundancy, and increase the SCC capacity to better meet the needs of the South Coast Communities.

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Watershed	Sponsor	Project	Project Description
South Coast	City of Santa Barbara and Santa Barbara County Flood Control District	Lower Mission Creek Flood Control and Rehabilitation Project	This 1.3 miles long project includes the removal of concrete channel walls, banks, and bed to be replaced with natural stream bed features and vegetated, stabilized banks, using the "joint planting" strategy, where live riparian cuttings are used to stabilize and reinforce the soil upon which large boulders and other natural elements are stacked. The project includes replacement of several bridges that span over Mission Creek, including Mason Street, Haley Street, Cota Street, and Ortega Street bridges.
South Coast	City of Santa Barbara	Old Mission Creek Storm Water Management and Restoration Project	The project includes construction of wetland detention ponds to filter storm water runoff from a 700 acre sub-watershed and restoration of approximately two acres of riparian habitat along Old Mission Creek, including stabilization of 700 linear feet of creek channel, construction of 0.3 acres of new wetland habitat, and removal and replacement of non-native plants with native plants.
South Coast	Goleta Sanitary District	Fairview Avenue Sewer Line Installation Project	Install approximately 6,340 feet of new sewer line along Fairview Avenue in Goleta, Santa Barbara County. The current sewer line in this area ranging from 8 to 15 inches in diameter will be abandoned in place. The location of the new sewer pipeline will be moved to the east and placed in a less environmentally sensitive area.
South Coast	Goleta Sanitary District	Mattorral Way Creek Arial Crossing Sewer Replacement Project	Replace the sewer pipe and bridge which crosses San Antonio Creek north of Highway 101. The existing bridge and abutments are no longer structurally sound due to earth movement, erosion, and deterioration of the concrete and steel materials.
South Coast	Goleta Sanitary District	Modoc Road New Sewer Line Installation Project	Install approximately 5,918 feet of new sewer line along Modoc Road near Cieneguitas Creek in Goleta, Santa Barbara County. The new sewer line in this area will range in size from 6 to 8 inches in diameter.
South Coast	Goleta Sanitary District	Water Reclamation Facility 2007 Refurbishment Project	Refurbish the filter valves and automated valve operators located in the reclaimed water filter process. The scope of the work will include the purchase and installation of 16 valves, valve shafts and electric valve operators.
South Coast	Goleta Water District	ASR Well Rehabilitation and Construction	Rehabilitate one existing well and construct one new well, to more efficiently manage the Goleta Groundwater basin and Goleta Water District's conjunctive use program.
South Coast	Goleta Water District	Backwash Tank Replacement at 4 Wells	Replacement of undersized backwash tanks used in treatment of groundwater for 4 wells. When replaced, larger tanks will reduce – possibly eliminate- waste of water to drain. Water used for backwash can be retreated and injected to groundwater basin and/or supplied for potable use instead of wasting.
South Coast	Goleta Water District	Cathedral Oaks Pipeline Replacement	Replace 1800 feet of 12 inch diameter pipe with 20 inch diameter pipe. This project will reduce pressure losses and thereby increase volume flow to meet peak demands and emergency fire flows.
South Coast	Goleta Water District	Corona Del Mar Water Treatment Plant - Sedimentation Basin Effluent Upgrades	The proposed project will include modifications and upgrades to the District's existing Corona del Mar Water Treatment Plant as follows: <ul style="list-style-type: none"> · Replacement of deteriorated and inefficient effluent launders, · Installation of new plate settlers within the sedimentation basin, · Modification and upgrade of the combined effluent channels for improved efficiency, and · Replacement of the deteriorated filter backwash troughs.
South Coast	Goleta Water District	Downstream Reservoir Meters	Install meters downstream of District storage reservoirs to measure area demands, determine areas of unaccounted water, minimize losses and optimize efficiency.

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South Coast	Goleta Water District	Interconnect with City of Santa Barbara	Pipeline and Pump Station connection between the water systems of Goleta Water District and City of Santa Barbara. This will provide the ability to supply water from one agency to the other during big peak demands and emergencies. Also would increase the amount of water that can be delivered to other agencies downstream from the City of Santa Barbara.
South Coast	La Cumbre Mutual Water Company	Blended Irrigation Project	Use of non-potable groundwater from a well exceeding Iron and Manganese levels by blending with water from a 31-acre lake located on a golf course, to offset the state water usage. The proposal is to install a wet well, intake structure and variable frequency drive pump station to pump lake water into the irrigation system.
South Coast	La Cumbre Mutual Water Company	Iron and Manganese Removal Plant	Construction of a 2,150 gpm iron and manganese removal treatment plant, treating groundwater for domestic potable water service. The source water is approximately four times limit for these parameters. Treated water would offset state water usage and provide approximately 38% reserve capacity for reliability.
South Coast	Santa Barbara County - Project Clean Water	Diversion non-storm flows from storm drain system to sanitary system	The project is located in Isla Vista, one of the most densely populated communities in California and home of the UCSB campus. Most runoff in Isla Vista is treated with a trash/gross solids separator. There are four such solid separators. Pollutants that are smaller than 0.185" are passed through the separators. These pollutants are then discharged, untreated, onto the beach. Due to commercial and residential water use (i.e. landscape overwatering, car wash, hosing paved surfaces, etc.) low flows are discharged from the storm drain system and onto the beach on a daily basis year-round. This project would divert flows from the storm drain system into the sanitary collection system during dry periods, eliminating all non-storm water discharges and its associated pollutants.
South Coast	Santa Barbara County Flood Control District	Las Vegas and San Pedro Creeks, Goleta	This project consists of the construction of two improved reinforced concrete box culverts (RCB) along San Pedro Creek and Las Vegas Creek in Goleta.
South Coast	Santa Barbara County Flood Control District	San Jose Creek Improvements (Goleta)	Modifications to the San Jose Creek, primarily affecting the tops of the existing banks, in order to increase channel capacity.

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South Coast	Carpinteria Sanitary District	Bluffs Sewer Relocation Project	Relocation of approximately 6,000 linear feet of existing gravity sewer pipeline from current location along edge of Carpinteria Bluffs to within Carpinteria Avenue. Includes reconstruction of the inverted siphon crossing under Carpinteria Creek at Carpinteria Avenue. This pipeline is exposed within the creek bed and flow has been temporarily diverted to another pipeline to prevent the discharge of sewage in the event the siphon is physically damaged.
South Coast	Carpinteria Sanitary District	Carpinteria Creek Overhead Crossing Replacement Project	Removal of an existing 14-inch diameter cast iron sewer pipe that is suspended over Carpinteria Creek where it crosses a public bicycle path immediately north of US 101. Failure of pipe or pier supports would result in direct discharge of untreated sewage to Carpinteria Creek. Replacement of suspended line would enhance natural setting within Creek corridor.
South Coast	Carpinteria Valley Water District	Central Zone Transmission Main Project	Construct a 20 inch water main approximately 1.25 miles long to connect existing wells and distributions systems and a 3 MG tank.
South Coast	Carpinteria Valley Water District	Recycled Water Feasibility Study	Study the feasibility of developing a recycled water system in the Carpinteria Valley. The study will include an analysis of cost related to implementing a recycle project, the potential users of such a water supply, the economics of a recycled water supply verses the current and potential new water supplies, and the environmental benefits of a recycled water supply project.
South Coast	City of Santa Barbara	Braemer Area Sewer Extension Project	Extension of the City's sewer system to serve approximately 100 properties not currently served by municipal sewer. A preliminary feasibility design study has been completed. The extension would include up to approximately 10,000 feet of 8-inch gravity sewer mains and up to 3,000 feet of 3-inch force mains. The area to be served is on the coastal plain adjacent to the ocean.
South Coast	City of Santa Barbara	El Estero Swale Restoration Project	Restoration and enhancement of a degraded wetlands and adjacent area next to El Estero Wastewater Treatment Plant. The area is classified as habitat for an endangered turtle species.
South Coast	City of Santa Barbara	Elings Park Solid Waste Assessment Test/Corrective Action Plan	Eling's Park is the site of one of the City of Santa Barbara's old open air dumps. Gas monitoring at the Site shows methane gas above lower explosive levels. This dump was abandoned prior to the promulgation of landfill requirements. California Code of Regulations (CCR) Title 27 Section 20080(e) establishes that dumps abandoned/inactive on or before November 27, 1984, are not immediately subject to the Closure and Post-Closure Maintenance requirements of CCR Title 27. Additionally, Title 27, Section 20080(g) gives the Regional Board discretion in deciding if the persons/entity responsible for discharges of waste at the dump will be required to develop and implement a detection-monitoring program. Thus, if groundwater monitoring shows water quality is impaired, such persons/entity may be required to develop and implement an acceptable corrective action program. Depending on the level (extent and degree) of groundwater quality impairment, an acceptable corrective action program may include a proposal for the installation of a final cover system, a gas extraction system and/or the implementation of an acceptable groundwater treatment alternative.
South Coast	City of Santa Barbara	Las Positas Storm Water Management Project	Low impact development project that retrofits the existing Santa Barbara Golf Club with Best Management Practices for water quality treatment and peak flow reduction. The primary purpose is to detain and treat urban storm runoff that enters the golf course from surrounding neighborhoods, in order to improve water quality downstream in Las Positas Creek, the Arroyo Burro Estuary, and Arroyo Burro Beach.

TABLE C-2**Santa Barbara County IRWMP - Tier II Projects Sorted by Watershed**

Watershed	Sponsor	Project	Project Description
Santa Ynez	Central Coast Water Authority	Groundwater Banking Opportunities Study for the SB County Water Agencies	This study would identify agencies that may benefit from a groundwater banking program both within CCWA's service area and in the central valley of California. The study would also identify and prioritize benefits, risks, and costs associated with several scenarios.
Santa Ynez	Central Coast Water Authority	San Luis Obispo County Groundwater Bank, Pipeline, Spreading Grounds, and Pump-Back System Design and Construction	Funds would provide design and construction for a groundwater bank near the Polonio Pass Water Treatment plant. This plan will be dependent on the results of the recently initiated Paso Robles Groundwater Basin Water Banking feasibility study and additional studies yet to be determined. In most years, several thousand acre-feet of State Water allocation are lost because they cannot be taken into storage. This study will identify mechanisms to better utilize State water supplies and maintain reserves for use during droughts.
Santa Ynez	Central Coast Water Authority	State Water Project Water Quality Improvement Study and Construction of Treatment Plant Improvements	This study would identify current and future water quality improvement needs for the Polonio Pass Water Treatment Plant and provide funds to make identified improvements. Taste and odor problems have been problematic in treating State water for several years. The increasingly stringent regulatory environment and public perception will mandate water quality improvements in the future.
Santa Ynez	City of Santa Maria	Central Irrigation Control System	Replacement of the existing City of Santa Maria central irrigation controller system for the short and long term water management objectives of the parks. Landscape Maintenance Districts and Special Benefits Zones. It was predetermined that the selected product must be able to provide the users with the constant monitoring of water use, weather information, notification of irrigation problems, and the ability to communicate this information back to the users. These product features were determined with the goal to empower the users to make necessary changes and repairs, thus enabling them to lower water use and costs. It is believed that the new central irrigation controller can achieve substantial water savings in the parks and public easement areas.
Santa Ynez	City of Santa Maria	Demineralize Ground Water Wells	Implementation of a program to treat local groundwater total dissolved solids (TDS) and total hardness (TH) levels to those of State Water Project (SWP) water. This will include a review of treatment options available, a site location study to optimize brine disposal and the use of current facilities, a pilot study, and construction of the recommended facilities. The City of Santa Maria supplies potable water to its customers with a blend of SWP water and local groundwater. Local groundwater has high TDS and TH compared to SWP water. These constituent levels are rising on a yearly basis. The City previously constructed a well header pipeline and a Blending and Disinfection Facility to blend both water sources.
South Coast	City of Santa Maria	Twitchell Reservoir; Dredge Downstream Release Gate Inlet Structure	Implementation of a dredging program at Twitchell Reservoir to permanently protect the dam operator's (Santa Maria Valley Water Conservation District) capability to release floodwaters, as well as conserve and store surface water collected under Department of Water Resources permit. The program would also provide some levee protection for reaches of the Santa Maria River. The levee protects agricultural, municipal and industrial areas downstream of the reservoir.
South Coast	Cachuma Conservation Release Board / Santa Ynez River Water Conservation District	El Jaro Creek, Cross Creek Ranch Fish Passage Enhancement	The Cachuma Member Agencies seek funding to improve endangered steelhead passage on El Jaro Creek, a tributary of Salsipuedes Creek and the Lower Santa Ynez River. The proposed project will install a fish ladder through a low flow (Arizona) crossings that is seldom in use and will open up approximately 10 miles of good stream habitat for spawning and rearing steelhead. Project monitoring will be conducted by the Cachuma Biologists to determine presence and absence of fish and changes in migration patterns of juvenile and adult steelhead migrants utilizing the system.

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Watershed	Sponsor	Project	Project Description
South Coast	City of Solvang	Water Treatment Plant	Construction of a treatment plant to treat water wells for surface water influence. It will allow year round usage of the Santa Ynez River Underflow wells.
South Coast	Santa Barbara County Parks	Lake Cachuma Sewer Lift Station Upgrades	Upgrade existing lift stations, including relocation, to meet setbacks from long term lake level surcharging. Upgrades will include two new lift station facilities relocated away from high water setback, and upgrades to a third lift station in order to meet regulatory code requirements
South Coast	Santa Barbara County Parks	Lake Cachuma Sewer Treatment Plant	Installation of a new sewer treatment system includes an extended aeration steel package treatment plant. The new plant would consist of above grade steel tanks, aeration basin and secondary clarifiers. Some of the existing facilities (i.e., control building) could be reused. A majority of the existing treatment plant would be demolished.
South Coast	Santa Barbara County Parks	Lake Cachuma Water and Fire Distribution System	Install new water main system, new reservoir, re-roof of old reservoir and a dedicated 8" fire line and hydrants within Lake Cachuma County Park. Current fire flows and hydrants do not meet Fire Department standards. Construction of the distribution line may require crossing of a major highway. Additional reservoir will provide fire flow and emergency storage capacity. New upsized main line will meet flow requirements for water and fire needs.
South Coast	Santa Barbara County Parks	Lake Cachuma Water Treatment Plant	Relocate and install new water treatment facility to reduce impacts to existing Lake Cachuma water reservoir from long term lake level surcharge and to meeting current regulatory requirements for water treatment facilities.
South Coast	Vandenberg Village Community Services District	Lompoc Groundwater Basin Recharge Study	Explore various methods and study the feasibility of enhancing recharge of the Lompoc Groundwater Basin. Two of its three sub-basins, the Lompoc Plain and the Lompoc Uplands, are hydrologically connected and together supply all the drinking water to the City of Lompoc, Mission Hills, and Vandenberg Village. Engineering and survey reports document about 40,000 acre feet of "accumulated dewatered storage" in these two sub-basins.
South Coast	Vandenberg Village Community Services District	Water Quality Improvement Project	Add a pellet softening process to existing iron and manganese filtration plant to reduce hardness in groundwater. Process uses a fluidized bed of grains to crystallize calcium carbonate (CaCO ₃) and removes calcium, iron, manganese, magnesium, and silicate. Results include improvement of local and regional water supply reliability by reduction of high concentrations of minerals and total dissolved solids in drinking water as well as reducing chlorides in treated wastewater which recharges the Lompoc Groundwater Basin. A pilot study would be accomplished first, to determine the cost and effectiveness of the process.
South Coast	Cachuma Operation and Maintenance Board	Lauro Reservoir Debris Basin Improvement Project	Increase size of the existing basin, improve the debris basin dewatering system, and improving access to the site. The debris dam would be reconstructed to double the size of the basin. A PVC and gravel drain system would be constructed on the floor of the basin to improve the dewatering process. The roads into and out of the reservoir would be improved to better allow trucks access to the site to improve the debris basin cleaning process.
South Coast	Cachuma Operation and Maintenance Board	South Coast Conduit Lauro Vent Improvements	The project involves adding 427± LF of 36" piping from the surge tank above the Lauro Yard on the southern section of the SCC to the existing energy dissipation structure for Lauro Reservoir. This will allow original USBR design capacity of 24 MGD to be achieved by raising the HGL and allowing control of overflows resulting from surges.

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Watershed	Sponsor	Project	Project Description
South Coast	Cachuma Operation and Maintenance Board	South Coast Conduit Line Valve Project	The project includes the installation of 6 line- valves on the lower reach of the South Coast Conduit (SCC). The installation of these valves includes the installation of a bypass and line-stop system, a new section of pipeline, new air valves, and new butterfly valve. These valves will be installed on 30-inch and 27-inch pipe at appropriate intervals along the SCC. This project will improve the reliability, integrity, and operations of the SCC.
South Coast	Cachuma Operation and Maintenance Board	South Coast Conduit Pipeline Stream Crossing Improvements	Through realignment and/or reinforcement of the South Coast Conduit (SCC) at stream crossings, reliability and integrity will be enhanced thus protecting the water supply of the South Coast communities. As the SCC travels from the Goleta area to Carpinteria it crosses as many as twenty-six streams. This project will address concerns at all twenty-six stream crossings.
South Coast	Cachuma Operation and Maintenance Board	South Coast Conduit Rehabilitation and Betterment Project	This project will rehabilitate all facilities and appurtenances associated with the South Coast Conduit (SCC). This includes the rehabilitation of 8 control stations; 200 air vent, blow-off, and meter structures; four reservoirs; and the abandonment of 14 turnout vaults. This project will improve the reliability, integrity, and operations of the SCC.
South Coast	Carpinteria Sanitary District	Carpinteria Valley Water Recycling Project	Development of a municipal recycled water project to serve the City of Carpinteria and surrounding areas of the Carpinteria Valley. Project components include addition of unit processes (e.g., filtration) at the CSD wastewater treatment facility necessary to produce Title 22 recycled water; distribution pumping; backbone pipeline distribution system; and irrigation piping for user sites.
South Coast	City of Carpinteria	ABOP Enhancement	Additional staff time to open this service center for additional hours.
South Coast	City of Carpinteria	Carpinteria State Beach Town Trail and Bioremediation Project	Project features a trail link from Palm Avenue to Linden Avenue and the creation of an 18,000 square foot fresh water bioremediation area helping to treat first flush runoff from the heavily urbanized 6th Street warehouse area before the water reaches the Carpinteria Salt Marsh Nature Preserve. Other features include water quality, public education, pedestrian safety, recreation, traffic reduction and economic benefits for the community. Trail makes a critical link between the Carpinteria State beach campgrounds and the old town Carpinteria and is the result of a strong partnership with the California Department of Parks and Recreation.
South Coast	City of Carpinteria	City Hall Green Building Retrofit	Project includes sufficient upgrades to make the building energy self sufficient. This includes photovoltaic units and solar water heating. Other city-wide public buildings could be included in this plan.
South Coast	City of Carpinteria	Creek side land acquisition	Acquisition of parcels of land adjacent to Carpinteria Creek. Several parcels of vacant land have been identified as appropriate acquisitions to help preserve the habitat of the Carpinteria Creek including the effort to enhance the steelhead carrying capacity of the creek. Carpinteria Creek is considered to have the best potential among central coast coastal creeks for steelhead recovery due to the number of pristine over summer steelhead habitat creek miles found in the Los Padres National forest. The quality of the creek through the urban center is of critical importance in order for the fish to access these areas.
South Coast	City of Carpinteria	Public Works yard cover	Cover the public works yard in order to prevent any storm water runoff. The yard is the receiver site for a variety of wastes and is the maintenance center for the City's Public Works crew. By covering the yard, contaminated runoff would be prevented from reaching the nearby ocean.

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South Coast	City of Carpinteria	State Beach Town Trail and Bioremediation Project	Project features a trail link from Palm Avenue to Linden Avenue and the creation of an 18,000 square foot fresh water bioremediation area helping to treat first flush runoff from the heavily urbanized 6th street warehouse area before the water reaches the Carpinteria Salt Marsh Nature Preserve. Other features include water quality, public education, pedestrian safety, recreation, traffic reduction and economic benefits for the community. Trail makes a critical link between the Carpinteria State beach campgrounds and the old town Carpinteria and is the result of a strong partnership with the California Department of Parks and Recreation.
South Coast	City of Santa Barbara	Airline Terminal Water Efficiency and Storm Water Management	Use Leadership in Energy and Environmental Design (LEED) process to design and implement a plan to minimize water use, use recycled water, reduce storm water quantity and improve storm water quality at the new airline terminal planned for Santa Barbara Airport. Successful incorporation of water saving elements and advanced storm water management techniques into the design of the airline terminal project will result in a long-term reduction in water consumption for a large public facility and will improve storm water discharges to the Goleta Slough.
South Coast	City of Santa Barbara	Airport Recycled Water Supply	Develop a supply system for recycled water from Goleta Sanitary District facilities to Airport properties. Santa Barbara Airport is directly adjacent to Goleta Sanitary District, which produces recycled water, but because of the lack of supply lines, the Airport is unable to use the resource to conserve potable water supplies.
South Coast	City of Santa Barbara	Airport Sewer Repair and Replacement	Repair and replace the aging Airport wastewater collection system to eliminate infiltration which has lead to sanitary sewer overflows and relocate existing sewer lines that pass through sensitive habitat of the Goleta Slough. Goleta Slough is a 303(d) impaired water body for pathogens, metals, priority organics and siltation/sedimentation.
South Coast	City of Santa Barbara	Andree Clark Bird Refuge Water Quality and Habitat Enhancement Project	Develop and implement a water quality and habitat enhancement project at the 29-acre Andree Clark Bird Refuge that will improve water quality, restore native habitat and improve recreational opportunities for Santa Barbara residents and visitors.
South Coast	City of Santa Barbara	Cater Water Treatment Plant – Advanced Treatment Project	An upgrade to the City's Cater Water Treatment Plant to insure compliance with the upcoming Stage 2 Disinfection Byproducts Rule and the Long Term 2 Enhanced Surface Water Treatment Rule. The City is currently conducting pilot testing of potential advanced treatment schemes to determine the basis of the project design.
South Coast	City of Santa Barbara	Corporation Yard Well Replacement	Replacement of an existing well at the City's Corporation Yard location that has deteriorated to the point where sanding and corrosion have limited its usefulness. The location can produce up to 600 AFY of good quality water useful in meeting water quality standards in the distribution system as well as water supply targets during summer peaking and drought periods. A new municipal water supply well will be constructed with 14" stainless steel casing to a depth of 675 feet.
South Coast	City of Santa Barbara	Desalination Modernization Project	The City's desalination facility was constructed in 1991-92 as a temporary emergency water supply. Its use was limited to the remaining portion of that severe drought, but has been converted to permanent status for use in anticipated future severe droughts. The project is not currently scheduled for implementation, but is a potential project in the event of severe drought or other significant interruptions to the regional water supply. Improvements would include recommissioning the facility with new membranes, new filter media, and new control equipment to reflect advances in technology since the original construction.

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South Coast	City of Santa Barbara	El Estero Aeration Blower Replacement Project	Replacement of the aeration blowers that supply air to the secondary stage of the wastewater treatment process. The project aims to improve the reliability and efficiency of the treatment process. Significant energy savings are anticipated as a result of the replacement.
South Coast	City of Santa Barbara	Goleta Slough Tidal Circulation Restoration	Phase II restoration of tidal circulation to portions of the Goleta Slough, including restoration and maintenance of native habitat. Phase I of the Tidal Circulation Study successfully restored tidal circulation to a portion of the Goleta Slough and assessed the impact of that habitat change on wildlife use patterns. Phase II of the project would restore the natural ecosystem by reintroducing tidal circulation and native habitat to additional portions of the Goleta Slough.
South Coast	City of Santa Barbara	Goleta-Santa Barbara Interconnect at Sterrett Avenue	Construction of an interconnection between the water distribution systems of the City of Santa Barbara and the Goleta Water District. The interconnection will allow the two agencies to back each other up during periods of planned or unplanned maintenance, and other supply interruptions.
South Coast	City of Santa Barbara	Laguna Channel Urban Runoff Water Treatment Project	The project includes installation of an ultra violet or ozone water filtration system at the outlet of Laguna Channel before it enters the Mission Creek Lagoon in order to treat urban runoff from the 2,020 acre Laguna Channel watershed.
South Coast	City of Santa Barbara	Lower Arroyo Burro Restoration Program	Design and implementation of creek bank stabilization and riparian habitat restoration projects on a reach-by-reach basis within the lower Arroyo Burro watershed. A collaborative project of the City, County and private landowners, restoration projects would include large scale modifications to the creek channel (widening, creation of flood plains, natural grade control structures, etc.), removal of key invasive plant species, installation of native plant species, and improvements to public access. The restoration efforts would be designed and implemented in order to reduce erosion, reduce flood risks, improve water quality, improve wildlife habitat and diversity, and improve educational and recreational opportunities.
South Coast	City of Santa Barbara	Mission Creek Lagoon Restoration Program	Restoration of approximately 3 acres of wetland habitat within and around the Mission Creek Lagoon, in order to improve water quality within the lagoon and coastal ocean at East Beach, enhance habitat for the endangered tidewater goby and Southern Steelhead Trout, and improve passive recreational use of the surrounding beach area. Physical protection of the lagoon would be established by more clearly defining limits of beach access to the lagoon, while improving the overall viewing appreciation of the lagoon by beach-goers.
South Coast	City of Santa Barbara	Ortega Groundwater Treatment Plant Reconstruction	Reconstruction of the Ortega Groundwater Treatment Plant to provide treatment for the City's municipal groundwater supply in the downtown area. The wells provide a back-up water supply for periods of drought and other emergencies, as well as assisting in meeting water quality standards. Treatment is required to address water quality and aesthetic concerns associated with iron, manganese, and hydrogen sulfide; current and future regulations; and additional problematic parameters such as PCE and radon. The existing treatment facility was designed primarily for iron, manganese, and hydrogen sulfide removal and is not adequate to address the other constituents. The proposed treatment scheme involves airstripping to remove H ₂ S, pressure filtration, off-gas scrubbing, and solids handling. The new plant is proposed at a capacity of 3 MGD, expandable to 5 MGD. A pilot study has been completed to test the proposed treatment scheme. Minor additional pilot work will be carried out and the preparation of technical documents in support of environmental review is underway.

TABLE C-2**Santa Barbara County IRWMP - Tier II Projects Sorted by Watershed**

Watershed	Sponsor	Project	Project Description
South Coast	City of Santa Barbara	Out-of-City Sewer Extension Project	The sewer extension will serve unincorporated areas adjacent to the City. These areas are not served by a public sewer system and rely on septic tanks for waste disposal. Some of these areas would logically be served by the City sewer system if a consensus could be reached on how to do so and if funding were available to help provide an incentive for property owners to move ahead with the extensions. The project would involve the construction of sewer main extensions as deemed feasible to serve such areas.
South Coast	City of Santa Barbara	Potential Phase 3 Recycled Water System Expansion	Additional phase to follow two earlier phases that involved construction of treatment and distribution facilities to serve the major landscaped areas in the City. This project will assess the economic feasibility of further extensions of the system for enhanced implementation of local and State policies in support of recycled water use. Four branches have been conceptually identified for extension: Franklin area extension, Alameda/Courthouse extension, Cemetery extension, and La Cumbre Golf Course extension. These areas offer the potential displacement of potable irrigation on approximately 100 acres of irrigated land. In addition to main extensions, equipment upgrades would be needed to handle the additional capacity, as well as improvements at the user sites to convert to recycled water.
South Coast	City of Santa Barbara	Recycled Water Quality Improvement Project	Add reverse osmosis to the existing tertiary treatment component of the City's recycled water facility. Levels of sodium and chloride in recycled water are high enough that blending with potable water is currently required during most of the year to achieve acceptable irrigation water quality. RO treatment on a portion of the recycled water stream is anticipated to eliminate blending, thereby freeing up potable water for higher uses. The project targets a net improvement to recycled water quality as well, to allow broader use and acceptance of recycled water for irrigation, and thereby increased displacement of potable water use.
South Coast	City of Santa Barbara	Stearn's Wharf Commercial Buildings Sewer Pipe Replacement	Replace deteriorated cast iron sewer pipe under commercial buildings 217, 219 and 221 on the Stearns Wharf with ENFIELD, flame retardant plastic pipe. Scope of work to include approximately 400 ft. of 4" pipe, 200 ft. of 2" pipe, 80 ft. of 3" pipe and 20 ft. of 6" pipe, replacing all hangers with stainless steel type 316 and replacing two 6" gate valves.
South Coast	City of Santa Barbara	Sycamore Creek Rehabilitation Project	Reconstruction and restoration of approximately 2000 linear feet of Sycamore Creek's concrete channel and some eroding earthen banks from Cacique Street on the lower east side of the City of Santa Barbara, under Highway 101 and the railroad bridge, to Por La Mar Circle at the Santa Barbara Zoological Gardens. Bank and channel restoration would implement "joint plantings" rehabilitation design, where live riparian cuttings are used to stabilize and reinforce the soil upon which large boulders (i.e., "natural" rip rap) are placed. This method stabilizes banks by improving the drainage, extracting soil moisture, minimizing loss of fines and slowing water velocities near the bank. Joint planting has a more natural appearance than a structural treatment alone.
South Coast	City of Santa Barbara and Environmental Defense Center	Upper Mission Creek Flood Management and Habitat Improvement Project	Removal of half of the concrete bottom slab for the entire mile of the channel, excavation of several feet into the underlying materials and construction of a natural bottom creek channel with areas of lowered concrete embedded roughness. Results will include restoration of over one mile of creek channel and the creation of over one acre of wetland habitat including removal of three fish passage barriers and removal and replacement of non-native plants with native plants.

TABLE C-2**Santa Barbara County IRWMP - Tier II Projects Sorted by Watershed**

Watershed	Sponsor	Project	Project Description
South Coast	City of Santa Barbara	Watershed Invasive Plant Removal	The project includes removal of key invasive plant species at various locations along the creek corridors and open space areas within the City of Santa Barbara. The project also includes replacement of non-native plants with native plants. The initial program efforts will be focused primarily on two invasive weed species: arundo and pampas grass but will also address castor bean, English ivy, vinca and other common invasive species. The scope of this project is to develop watershed specific programs to remove arundo and pampas grass along creek channels and tributaries in the Mission, Arroyo Burro and Sycamore creek watersheds as well as public open spaces. Where possible, collaboration with private landowners will include non-native invasive species removal on privately owned parcels adjacent to public open spaces. The removal of invasive plants will be followed by the replacement with native trees and shrubs and include species such as sycamore, oak, willow and cottonwood trees.
South Coast	Goleta Sanitary District	Facilities Planning Study	Facilities planning study that will develop a feasible, cost-effective, and environmentally sound wastewater treatment plant design. The facility plan will identify reliable, well proven technologies to upgrade the existing blended secondary treatment process to the full secondary treatment level.
South Coast	Goleta Sanitary District	Wastewater Treatment Plant Upgrading Project	Upgrade the current treatment facilities from a blended primary/secondary effluent discharge to a full secondary treatment plant. The current facilities have the ability to treat 70% of Goleta Valley's wastewater to a secondary level this upgrade project will allow for the treatment of 100% of the wastewater to the full secondary level.
	Goleta Water District	Atascadero Water Storage Tank	Construction of 3 million gallon water reinforced concrete storage tank. This project will meet storage needs for eastern area of Goleta for fire fighting and other emergencies while also meeting domestic demands.
	Goleta Water District	Ellwood Reservoir Storage	Construct 2 Million gallon potable water storage reservoir to help meet fire demand and other emergencies.
	Goleta Water District	Radio Telemetry System Project – Phase 2	The Goleta Water District owns and operates 27 remote water supply/distribution facilities including our treatment plant, wells, pumping stations, chlorination stations, and reservoirs. The proposed Radio Telemetry System Project - Phase 2 includes the installation of radio equipment and instrumentation at 14 of these sites to allow the District's existing SCADA system to remotely monitor and control these facilities. The work will include the installation of antennas, radio control panels, flow meters, pressure sensors, valves, and related work. Two recently completed projects have addressed 10 of the District's sites. A future project will address the last few remaining sites.
	Goleta Water District	Recycled Water System Improvements	Expand recycled water booster pump station; extend recycled water distribution pipeline 9000 feet; construct 1 million gallon reservoir. Project need includes: water supply; water efficiency; use of local supplies; wastewater reuse.
	Montecito Sanitary District	Ocean Outfall Plume Modeling Study	Analysis including hydrodynamic conditions associated with the outfall pipe a comprehensive study of the plume and how it is affected by seasonal ocean currents and storm events is necessary. The project could be jointly undertaken by other local wastewater agencies.

TABLE C-2**Santa Barbara County IRWMP - Tier II Projects Sorted by Watershed**

Watershed	Sponsor	Project	Project Description
	Montecito Water District	Doulton Potable Storage Tank	Install a new 1 MG potable water storage tank at the Doulton facility to replace the existing 0.25 MG above ground steel potable water storage tank. This will require a lot line adjustment and the purchase of land contiguous with the District's Doulton facility where the new storage tank will be located.
	Montecito Water District	Doulton Treatment Plant Second Filter	Install a second filter at the existing 0.15 MGD Doulton Treatment Plant to better utilize the District's owned and operated Jameson Lake surface water supply during peak summer demand periods. The addition of a second filter will increase the plant's production capacity to about 0.5 MGD.
	Santa Barbara County Parks	Rincon Beach County Park Septic to Sewer Conersion	Convert wastewater flow at the existing park restroom from existing septic dry wells to Carpinteria Sanitary Sewer District main. Project plans are complete. Construction dependant upon District main line construction to the Rincon Point area.
	Santa Barbara County Public Works Department	Mission Canyon Sewer Main Extensions	Extension of sewer mains to facilitate the conversion of existing homes from septic to sewer. Mission Canyon Sewer District was formed by the County in 1984 as County Service Area 12 (CSA 12). A final Project would be determined from various alternatives that have been evaluated.