

Chapter 7 Benefits and Impacts

7.1 Introduction

This chapter documents the potential impacts and benefits associated with the implementation of the IRWM Plan 2013 and provides a high-level analysis of the projects included in the plan. This analysis is generally intended to serve as the foundation for evaluating IRWM Plan 2013 performance and understanding the potential impacts and benefits of implementing the IRWM Plan 2013. Projects and associated benefits and impacts may change over time as the plan is implemented, reflecting the adaptive management approach embodied in this document and discussed in detail in Chapter 8.

Benefits and impacts are evaluated at two levels: the first level is a general evaluation of the IRWM Plan 2013 and the second level is a more project specific discussion of the IRWM Plan 2013. The discussion of the benefits and impacts of stakeholder identified projects is at level of detail appropriate for the level of development at the time IRWM Plan 2013 was prepared. Implementation of IRWM Plan 2013 is discussed at a regional level and in a flexible context appropriate for adaptive management. Benefits and impacts are organized by regional objectives and focus on planning targets.

7.2 Review and Update of Benefits and Impacts

7.2.1 Project Specific Review

A more detailed project-specific impact and benefit analyses is anticipated to occur in 2014 prior to the potential submittal of a Proposition 84 Round 3 Implementation regional grant. Detailed project-specific analysis also is conducted per regional IRWM policy every two years in the Biennial Review. In addition, the review of project impacts and benefits has been conducted with every IRWM implementation grant application with the most recent project review process taking place in 2012 and described in Chapter 6 Integration and Project Review. Chapter 6 goes into detail about the expected impacts and benefits of plan objectives and targets.

7.2.2 Update of Impacts and Benefits Section of the IRWM Plan 2013

As stated in 7.2.1, the Region has routinely updated the plan, including project impacts and benefits, as a normal part of IRWM management activities. Since the writing of the original IRWMP in 2007, two biennial reviews have occurred at which time updates to the plan and projects have been incorporated. As projects are updated, the benefits and impacts of the projects are also updated. The last Biennial Review of 2012 is included in Appendix 2-B.

7.2.3 Impacts and Benefits to DAC/Environmental Justice Concerns and Native American Tribal Communities

Multiple benefits will be received by DACs with associated environmental justice benefits through the implementation of the plan. The issues challenging DACs and associated environmental justice concerns were identified early in the IRWM process. Projects that addressed DAC needs were given high priority through the project review process described in Chapter 6, Table 6.1. The Region has consistently provided in-kind support to DAC communities (the cities of Guadalupe, Casmalia, Cuyama, and areas of Santa Maria and Lompoc) for project

development and DAC projects have been included in every IRWM grant application since the very beginning of the IRWM program.

Section 7.3 that follows specifically references the benefits accruing to DAC communities and Native American Tribal communities by achieving IRWM plan targets and objectives. While local Native American interests have chosen not to actively participate in the Santa Barbara County IRWM process, the Region continues to actively encourage and solicit their participation (see Section 3.14.2 for more detailed information). Nonetheless, IRWM Plan 2013 delivers benefits to both DAC and the Native American Tribal communities. Examples of how the plan benefits these multiple communities by achieving regional targets can be found in Section 7.3.1. Examples from Section 7.3.1 are listed below:

- Implementing projects that help “meet the target of “restore 200 AF of surface storage capacity” would benefit the DAC cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water.
- Achieving the target of “recycled and reuse 6,714 AFY” (Section 7.3.1) would decrease the amount of imported water needed for both DAC cities of Santa Maria and Guadalupe.
- Increasing sustainable groundwater storage by 2,500 AFY” (Section 7.3.1) would directly benefit the cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water; both cities are DACs.
- Implementing emergency plans, where feasible” (Section 7.3.5) would result in Better emergency response and lower costs would directly benefit the DAC communities of Guadalupe, Lompoc, Santa Maria and the Santa Ynez Band of the Chumash, a Native American community.
- Ensure that 10% of the total future funding received from IRWM grants benefit DACs” (Section 7.3.8) will mean that more DAC projects receive funding benefitting those DACs.
- Address Climate Change through Adaptation and Mitigation means that regional actions such as implementing mitigation strategies that decrease emissions of GHGs, implementing “no regret” adaptation strategies, and achieving targets for water supply, resource stewardship, water quality, and infrastructure objectives will bring benefits to not only the entire Region but specifically Native American Tribes and DACs.

In the second column of Table 7.1, it is indicated whether the project will benefit a DAC area.

7.2.4 Inter-regional Benefits and Impacts

Inter-regional coordination has been on-going with Ventura County, San Luis Obispo County, and to a lesser extent Kern County, since 2005. Coordination has occurred through conference calls and meetings where programmatic concerns and issues have been discussed. A main goal of the meetings has been to augment benefits and positive impacts through mutually multi-regional sponsored projects. For example, both Ventura and Santa Barbara counties have portions of the Los Padres National Forest (LPNF) within their two regions. Stakeholders from both regions have met with a representative of LPNF and had many follow-up conference calls to discuss project development. See Section 3.14 Neighboring IRWM Efforts for more detailed information on this topic.

This chapter focuses on benefits and impacts to neighboring regions in Table 7.1 (Summary Tables of Benefits and Impacts Within and Outside the Region by Planning Target). The table organizes planning targets according to their relevant regional objectives and lists then both the inter-regional and regional benefits and impacts that will result to implementing projects that achieve targets.

7.3 Benefits and Impacts of IRWM Plan 2013 Implementation

Consistent with discussions in other chapters, benefits of the IRWM Plan 2013 are organized by regional objectives (and summarized in Table 7.1). These benefits will be measured, as appropriate, during implementation of the Plan

as discussed in Chapter 8. Pursuant to DWR guidelines, the discussion of benefits includes consideration of benefits to other regions, to disadvantaged communities, to Native American Communities and environmental justice concerns. In addition, the potential to reduce greenhouse gas emissions and adaptations to the effects of climate change are discussed. The following discussion evaluates the benefits and impacts of the targets associated with each objective.

7.3.1 Protect, Conserve, and Augment Water Supplies

In order to protect, conserve and augment water supplies, the following planning targets were incorporated in the IRWM Plan 2013:

- Restore 200 AF of surface storage capacity;
- Recycle and reuse 6,714 AFY (4,742 AF Laguna San; 849 AF Goleta WD; 1123 AF City of SB) (current is 4,127 AFY);
- Create 50 facilities that will augment and expand water supply;
- Conserve 5,000 AFY of water by 2035 through water use efficiency measures, and
- Protect, manage, and increase groundwater supplies by 2,500 AFY.

The benefits of each target are outlined below.

Restore 200 AF of surface storage capacity

The yield of local surface reservoirs has declined and will continue to decline in large part due to accumulation of silt and resulting reduction of storage. Removing accumulated silt would restore storage and thus yield. Limited silt removal has historically been practiced in Twitchell Reservoir and Gibraltar Reservoir. Silt may be removed by mechanical means or (in the case of Twitchell Reservoir) by “flushing” or making releases through the lowermost release works at relatively high rates. Restoring capacity would benefit the DAC cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water.

The benefits of increased local reservoir storage would be increased local supply and related decreased need for imported water. Since local supplies are less costly than imported water, a secondary benefit would be lower water costs. Decreased reliance on imported supplies would also make additional water available to other regions, including adjacent regions of San Luis Obispo and Ventura.

The actual water supply benefits of increased capacity depend on which reservoir and what level within the reservoir the storage capacity is increased. Thus the water supply benefit cannot be estimated without a specific project description.

Recycle and reuse 6,714 AFY

Recycling and reusing local wastewater would allow replacement of potable water supplies for landscape irrigation, dust control, as well as certain industrial and agricultural purposes. This would have the same effect as a new supply. Any new supply would serve to meet future demand growth, increase reliability of local sources and decrease the need for imported water supplies. Since the source of water for recycling is generally sewage effluent, the source would be available during drought conditions, helping to increase reliability of supply.

Indirect benefits would include decreased need for (and associated cost of) imported water. This would directly benefit the DAC cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water. In addition, the supply would be available during drought conditions, and would allow continued irrigation of landscaping. Protecting landscaping would preserve property values and thus have a secondary economic benefit. Reducing importation of water would lower energy use and associated emissions. In addition, decreased reliance on

imported supplies would make additional water available to other regions, including adjacent regions of San Luis Obispo and Ventura. An additional benefit of water recycling is reduced ocean discharges from wastewater treatment plants.

Create 50 facilities that will augment and expand water supply

The creation of 50 facilities to augment and/or expand water supply would substantially diversify the existing sources of water in the region. Facilities will be of varying size and type including the restoration, replacement, or expansion of elements of existing facilities or new facilities. Additional facilities to augment and expand supplies would increase reliability of local supplies because redundant sources and facilities can offer flexibility during drought or other emergency situations. New facilities that expanded local supplies would help meet any increased future demand. In doing so, these additional supplies would decrease the need for imported water. Decreased importation would reduce energy consumption and potentially increase availability to adjacent regions. In addition, increased local supplies would improve reliability in the case of disruption of the system delivering imported supplies.

Conserve 5,000 AFY of water by 2035 through water use efficiency measures

Conservation of 5,000 AFY of existing supplies would have the practical effect of reducing demand on local and imported sources. Reduced demand on existing sources would lessen the need to develop new sources; new sources generally have higher initial cost and higher operating cost. Thus water conservation would reduce future water costs. In addition, lower water use would reduce the demand for imported water thus lowering operational costs and reducing energy use. Reduced energy use would lower greenhouse gas emissions. Finally, reduced demand for imported water would free up supplies of imported water for use in adjacent regions of San Luis Obispo and Ventura Counties.

Protect, manage, and increase groundwater supplies by 2,500 AFY.

Increasing sustainable groundwater storage would expand opportunity for conjunctive use and groundwater banking. Expanded conjunctive use would increase availability of local supplies by allowing storage of surplus surface water for use during periods of low rainfall. Increased availability of local supplies would reduce the need to import water to the Region. This would directly benefit the cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water; both cities are DACs. Reducing the amount of imported water would reduce energy use and greenhouse gas emissions. Using less imported water would also make more water available for use in the Delta.

Groundwater banking could allow storage of water from outside a basin for eventual pumping and use. The benefits to the entity placing water in the bank include increased reliability of supply. The benefits to the existing users of the groundwater basin include improved water quality, higher groundwater levels (lower pumping costs) and may include some form of financial consideration.

7.3.2 Protect, Manage, and Increase Groundwater Supplies

In order to protect, manage, and increase groundwater supplies, the Region set a target in the IRWM Plan 2013 to increase sustainable groundwater storage by 2,500 AFY. As explained in the paragraph above (Section 7.3.1), achieving this target will be accomplished through increased conjunctive use and groundwater banking. Increasing sustainable groundwater storage by 2,500 AFY would directly benefit the cities of Santa Maria and Guadalupe by potentially lowering the cost of importing water; both cities are DACs. Improved water quality will be an additional benefit as additional water will likely increase water quality through dilution. With increased groundwater, the Region will move toward drought-proofing its water supplies and reducing the need for water imported from the Delta during times of drought. In turn, reduced imported water will reduce energy use and greenhouse gas emissions.

7.3.3 Practice Balanced Natural Resources Stewardship

Balanced resources stewardship is necessary to protect and enhance the overall quality of life in the region, including the local environment and adequate water supplies. In order to achieve this balance, the IRWM Plan 2013 incorporated the following planning targets:

- Conserve, preserve, protect, and restore 1000 acres of natural habitat, rangeland, and production agriculture
- Protect and restore 30 linear miles of habitat (includes removing barriers to fish migration)

The potential benefits of these planning targets are discussed below.

Conserve, preserve, protect, and restore natural habitat, rangeland, and production agriculture

Depending on the condition of the land under management, activities to conserve, preserve, protect, and restore natural habitat, rangeland, and production agriculture could have any of a wide range of benefits. Reduction or elimination of invasive species (such as *Arundo donax*) can restore or enhance stream flow and restore critical habitat for rare or endangered species. Conservation of natural habitat and rangeland can improve receiving water quality as well as protect and augment stream flow. Agricultural and range lands serve as areas for carbon sequestration and are critical to providing ecosystem service benefits. Ecosystem services are those benefits that arise from healthy functioning ecosystems, most notably production of oxygen, soil genesis and water detoxification. Control or elimination of invasive species can also protect or improve riparian corridors and stream flow capacity, thus both improving habitat corridors and flood management.

At an interregional level, protection of habitat such as stream corridors and upland areas will benefit migratory species such as birds and insects. In addition, restoration of stream habitat would broaden interregional opportunities for anadromous fish, reducing their susceptibility to disruptions of habitat at a watershed scale. As various stewardship activities occur, each may serve as an educational opportunity for the public and for local schools. Expanded educational opportunities would develop broader understanding of the importance of habitat protection.

Protect and restore linear habitat

Restoration and protection of linear habitat corridors would focus on stream courses and associated riparian zones. Activities could include improved quality of storm-water runoff, control or elimination of invasive species and removing barriers to fish migration. Depending on the specific activities, benefits would include improved instream water quality and enhanced or expanded habitat of rare or endangered species. In addition, improved water quality and habitat would increase opportunity for passive recreation. Improved or expanded instream and riparian habitat would support healthy populations of migratory or anadromous species at an interregional level. Expanding interregional opportunities for anadromous fish would reduce their susceptibility to disruptions of habitat at a watershed scale.

7.3.4 Protect and Improve Water Quality

Protecting, and in some areas, improving water quality is an important Regional Objective and is the focus of both planning activities and specific projects. In order to protect and improve water quality IRWM Plan 2013 identifies the following planning targets:

- Meet water quality objectives in current Basin Plan
- Comply with TMDL Requirements
- Achieve salt and nutrient goals as adopted through future Basin Plan amendments

Since substantial water quality regulation is underway, the Plan incorporates state and federal regulatory framework as its planning targets. Achieving each of the three planning targets would have the same benefits:

- Protect beneficial uses
- Protect habitat
- Enhance recreational opportunities

Since the Basin Plan establishes beneficial uses and water quality objectives for all surface waters in the region, protecting beneficial uses would, by definition, meet the Basin Plan water quality objectives. In addition, meeting both water quality objectives and TMDL requirements would assure that beneficial uses, including habitat protection, are protected long term. Salt and nutrient objectives are intended to assure long term viability of both ground- and surface-water resources. Plans to manage salt and nutrient could be formally incorporated into the Central Coast Basin Plan, tying them formally to the protection of beneficial uses.

7.3.5 Improve Flood Management

Improving Flood protection is the primary responsibility of the Santa Barbara County Flood Control and Water Conservation District (SBCFC). The planning target “increase land protected from flooding by 200 acres” would be met through SBCFC programs. That agency’s programs include maintenance of existing facilities and development of new facilities.

Increase land protected from flooding by 200 acres

The SBCFC has an ongoing program to maintain and expand flood protection within the Region. Individual projects may protect new areas or provide increased protection from larger but less probable floods. The SBCFC programs result in lower flood insurance costs based in meeting FEMA rating criteria.

Flood protection projects within the SBCFC are specifically designed to meet as many objectives feasible giving the location, funding sources and nature of the project. Therefore, the specific benefits of increasing land protected would depend of the specific nature of the project, but would at a minimum reduce risk to property and life. Depending on location, the design of new or modified projects is typically integrated with existing and potential future projects. Given the nature of typical flood control projects, water quality and water supply enhancements occur due to retention of flood peaks and design that enhances infiltration.

Some flood control projects may enhance stream habitat by removal of fish migration barriers and removal and ongoing control of invasive species. Where feasible these features are included as explicit elements of project design. In some cases flood control projects may enhance recreation, for example by providing dry weather playing fields in retention basins or recreational trails along levees.

7.3.6 Emergency Preparedness

Risk reduction and emergency response are key responsibilities of public agencies, including water management and supply agencies. In order to enhance emergency preparedness, the IRWM Plan 2013 incorporated the following planning targets:

- Increase area protected from fire and flooding by 1000 acres
- Implement emergency plans, where feasible

Although not all emergency situations can be anticipated, continued collaboration through the IRWM and other local forums supports ongoing efforts to reduce risk and improve emergency response.

Increase area protected from fire and flooding by 1000 acres

Protecting additional areas from flood and fire impacts would have a number of benefits. By expanding the areas protected, the public would directly benefits by reduced changes of personal harm or damage to property. In addition, risk to property is a key determinant of the need for or cost of fire and flood insurance so that reducing risk

may reduce insurance costs. Often measures to protect from fire or flood may be coordinated with existing or other future projects to enhance protection provided by any single project. Fire management may benefit habit and water supply by encouragement more frequent, less destructive, fires and creating a mosaic of habitat of different ages. Habitat mosaic is more productive habitat. In addition, more frequent fires avoid impacts to soil and vegetation that increase widespread erosion. A mosaic of vegetation of different ages helps avoid widespread fires. Avoiding large scale and intense fires protects downstream water quality by minimizing erosion and sedimentation.

Implement emergency plans, where feasible

Development and implementation of effective emergency response plans will provide more immediate aid to the public through better initial reaction by public and private responders. Better response will protect human health and safety while reducing damage to property and the environment. Elements of response plans may include mutual aid agreements or other provisions to identify and share resources. Sharing of capacity and resources increases emergency response capability, reduces redundant facilities, avoids unneeded capacity and reduces costs. Better emergency response and lower costs would directly benefit the DAC communities of Guadalupe, Lompoc, and Santa Maria and Native American communities.

7.3.7 Maintain and Enhance Water and Wastewater Infrastructure Efficiency and Reliability

Efficient and reliable water and sewer systems depend on design, operation and maintenance. With existing systems, ongoing maintenance, system upgrades and operational changes lead to more efficient and reliable operation.

Implement reliability improvements within water and wastewater agency service areas

Continuing improvement of existing water and wastewater systems will have a number of benefits. Adequate maintenance and operationally improvements lead to fewer service interruptions and increased system reliability. Close monitoring of system condition and operation can identify system losses or IRI and allow repairs to improve operational efficiency and lower long term cost.

7.3.8 Address Climate Change through Adaptation and Mitigation

Planning that relates to climate change generally focuses on adaptation to change so as to reduce adverse effects and reduction of so called greenhouse gasses. In order to plan for and adapt to Climate Change, IRWM Plan 2013 identifies the following planning targets:

- Implement mitigation strategies that decrease emissions of GHGs
- Implement “no regret” adaptation strategies
- Achieve targets for water supply, resource stewardship, water quality, and infrastructure objectives

The first two Planning targets focus on meeting the ongoing need for water supplies. The third aims to reduce one of the leading causes of climate change. The benefits of each are discussed below.

Achieve targets for water supply, resource stewardship, water quality, and infrastructure objectives

A key benefit to achieving targets for water supply, water quality and capacity of infrastructure is having some spare capacity with which to respond to unanticipated changes. In particular, achieving targets that exceed the most basic requirements provides time to plan and implement changes driven by climate changes or other factors. In addition, having the capability to plan for long term changes allows protection of natural resources, such as sensitive habitats, to be a key consideration.

Implement “no regret” adaptation strategies

No regret adaptation strategies, such as increased supply and improved operational flexibility, help protect against other sources of supply or treatment system disruption. These measures would have been implemented as a matter of astute response to future customer demands. They have the benefit of providing increased reliability in the face of a wide range of challenges, not just climate change.

Implement mitigation strategies that decrease emissions of GHGs

Strategies that reduce energy consumption will reduce emissions of GHG and other pollutants. Reducing energy consumption will also reduce operational costs. Other strategies to reduce GHG emissions may have other direct benefits such as the collection and use of methane from sewage treatment systems. Such collection and reuse can not only reduce releases of methane directly to the atmosphere, but also reduce the need to purchase energy from outside sources.

7.3.9 Ensure Equitable Distribution of Benefits

From the beginning the Santa Barbara Region IRWM process has focused on the needs of DACs. The initial IRWM Plan included project development for water and sewage system upgrades in two DACs. The IRWM process will continue to identify DAC needs.

Ensure that 10% of the total future funding received from IRWM grants benefit DACs

DAC projects will have a direct benefit to the health of DAC residents. Because public health issues can directly and indirectly affect all residents of the Region, continuing this commitment to meeting DAC needs will improve the public health for all sectors of the Region. Other project types that benefit DACs include water supply and water demand.

Table 7.1: Summary Tables of Benefits and Impacts Within and Outside the Region by Planning Target

Protect, Conserve, and Augment Water Supplies

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Restore 200 AF of surface storage capacity	<ul style="list-style-type: none"> Increased reservoir yield Reduced cost of imported water 	<ul style="list-style-type: none"> Increased short-term removed sediment transportation and site-specific impacts Cost of silt disposal 	<ul style="list-style-type: none"> Decreased need for imported supplies 	None Identified

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Recycle and reuse 6,714 AFY (4742 AF Laguna San; 849 AF Goleta WD; 1123 AF City of SB) (current is 4,127 AFY)	<ul style="list-style-type: none"> Decreased need for imported supplies Increased available water supply to meet greater demand Improved access to local supply and increased reliability 	<ul style="list-style-type: none"> Increased construction-related impacts Increased treatment level and energy use and GHG emissions 	<ul style="list-style-type: none"> Decreased need for imported supplies Decreased energy consumption for water treatment and conveyance associated with imported water 	None Identified
Create 50 facilities that will augment and expand water supply	<ul style="list-style-type: none"> Decreased need for imported supplies Increased available water supply to meet greater demand Improved access to local supply and increased reliability Improved reliability in case of disruption of imported supply system 	Increased construction-related impacts	<ul style="list-style-type: none"> Decreased need for imported supplies Decreased energy consumption for water treatment and conveyance associated with imported water 	None Identified

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Conserve 5,000 AFY of water by 2035 through water use efficiency measures	<ul style="list-style-type: none"> • Reduced need to develop new higher cost supplies • Reduced dependence on imported water • Increased available water supply to meet greater demand • Improved air quality through decreased GHG and other emissions • Benefits to DAC communities of Santa Maria and Lompoc 	<ul style="list-style-type: none"> • Decrease in finances for existing supply operations and infrastructure • Loss of local recharge 	<ul style="list-style-type: none"> • Decreased need for imported supplies • Decreased energy consumption for water treatment and conveyance associated with imported water 	None Identified
Increase sustainable groundwater storage by 2,500 AFY	<ul style="list-style-type: none"> • Reduced dependence on imported water • Reduced need for highest cost supply • Increased available water supply to meet greater demand • Improved access to local supply and increased reliability • Benefits DAC communities of Santa Maria and Lompoc 	None Identified	Decreased energy consumption for water treatment and conveyance associated with imported water	None Identified

Protect, manage, and increase groundwater supplies

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Increased groundwater supplies by 2,500 AFY	<ul style="list-style-type: none"> • Increase regional water supply reliability • Reduce imported water from the Delta • Improve water quality • Reduced costs of imported water to DACs • Reduced energy usage through reduced pumping • Reduced greenhouse gas emissions 	None Identified	<ul style="list-style-type: none"> • Reduce draw on imported water from the Delta during periods of drought 	None Identified

Protect and Improve Water Quality

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Meet water quality objectives in current Basin Plan	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified
Comply with TMDL Requirements	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified
Achieve salt and nutrient goals as adopted through future Basin Plan amendments	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified	<ul style="list-style-type: none"> • Protect habitat • Enhance recreational opportunities • Protect beneficial uses 	None Identified

Improve Flood Management

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Increase land protected from flooding by 200 acres	<ul style="list-style-type: none"> • Reduced risk to property and life • Reduced flood insurance costs • Increased multiple benefits of individual projects • Increased potential for water supply enhancement • Increased potential for water quality enhancement • Increased potential for habitat enhancement • Increased potential for recreation enhancement 	<ul style="list-style-type: none"> • Increased short-term construction and site-specific impacts 	None Identified	None Identified

Emergency Preparedness

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Increase area protected from fire and flooding by 1000 acres	<ul style="list-style-type: none"> Reduced risk to property and life Reduced flood insurance costs Increased multiple benefits of individual projects Increased potential for water supply enhancement Increased potential for water quality enhancement Increased potential for habitat enhancement 	None identified	Reduced risk of damage due to regional fires	None Identified
Implement emergency plans, where feasible	<ul style="list-style-type: none"> Reduced risk to property and life Reduced cost of redundant facilities 	None Identified	<ul style="list-style-type: none"> Reduced risk to property and life Reduced cost of redundant facilities 	None Identified

Maintain and Enhance Water and Wastewater Infrastructure Efficiency and Reliability

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Implement reliability improvements to 30% of customers within water and wastewater agency service areas	<ul style="list-style-type: none"> Increased system reliability Reduced distribution loss/IRI and related treatment costs 	<ul style="list-style-type: none"> Customer costs increase Construction related impacts 	None Identified	None Identified

Address Climate Change through Adaptation and Mitigation

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Achieve targets for water supply, resource stewardship, water quality, and infrastructure objectives	<ul style="list-style-type: none"> Increased supply reliability Preserved local habitats 	None Identified	None Identified	None Identified
Implement “no regret” adaptation strategies	Increased supply reliability	None Identified	None Identified	None Identified
Implement mitigation strategies that decrease emissions of GHGs	Improved air quality through decreased GHG emissions	None Identified	Improved air quality through decreased GHG emissions	None Identified

Ensure Equitable Distribution of Benefits

Planning Target	Within IRWM Region		Inter-Regional	
	Potential Benefits	Potential Impacts	Potential Benefits	Potential Impacts
Ensure that 10% of the total future funding received from IRWM grants benefit DACs	Improved public health for all residents of Region	None Identified	None Identified	None Identified

7.4 Potential Adverse Impacts of IRWM Plan 2013 Implementation

The discussion below provides a general evaluation of potential adverse impacts due to implementation of IRWM Plan 2013. More detailed discussion of potential adverse impacts depends on the specific measures taken to meet each planning target. For any projects undertaken, review that may be required pursuant to CEQA would disclose any significant environmental impacts and potential mitigation to reduce those impacts. CEQA review would be the responsibility of the agency taking the lead in any given project. Any fiscal impacts would be considered during funding of a project or program by the agency undertaking the project or program. The discussion of is organized around regional objectives and focuses on planning targets.

7.4.1 Protect, Conserve, and Augment Water Supplies

A wide range of projects may be undertaken to protect, conserve, or augment water supplies. A number of management measures are already employed within the Region. This discussion focuses on those measures that would be the result of new or significantly expanded programs or projects.

Restore lost surface water storage

Surface water storage capacity has been lost within the region due to siltation of surface reservoirs. In order to restore up to 200 AF of lost storage capacity two approaches are possible:

- Removal of silt from the active storage of the reservoir and/or
- Raising the maximum level of storage within the reservoir.

Experience within the Region includes proposals to raise Gibraltar Dam and Bradbury Dam (Cachuma Lake). This experience suggests that additional raising the level of a surface reservoir to increase capacity 200 AF would face significant permitting hurdles and would be economically infeasible.

Removal of silt has been evaluated for both Gibraltar and Twitchell Reservoirs; limited silt removal activities have occurred at each. From this experience the following impacts are likely to be associated with efforts to restore storage capacity through silt removal:

- Increased suspended sediment within the reservoir
- Air quality emissions associated with sediment removal
- Air quality emissions, noise and traffic associated with offsite sediment transport (if performed).

In addition to environmental effects, the cost of silt disposal is relatively high due to the volume of material involved (1,613 cubic yards/ acre foot).

Other supply augmentation

Water supply augmentation may include activities including new wells, new surface storage, desalination and increased importation for outside the region. In each case, construction of new facilities would be required. For any new facilities, short term constructed- related impacts would include air quality emissions, noise and increased traffic. Any new water supply facilities would have operational impacts associated with treatment and distribution. These impacts would include increased energy use and GHG emissions. New facilities would have additional capital costs associated with them.

Increased conservation

Increased conservation would result in less water distributed in a particular area. Depending on the nature of capturing water supply costs, less water delivered may result in a decrease in finances otherwise used for existing supply operations and infrastructure operation costs. In addition, more efficient use of imported water may result in less recharge to local groundwater or surface water systems.

7.4.2 Protect, Manage, and Increase Groundwater Supplies

7.4.3 Practice Balanced Resources Stewardship

Resources stewardship may include preserving existing restore values as well as restoring previously degraded resources. Increased short-term construction and site-specific impacts may occur if degraded resources are restored, particularly if large scale restoration employs mechanized equipment. Impacts could include temporary disturbance of existing habitat, equipment emissions and local sedimentation.

Preservation of resources may include development controls limiting land uses. This could lead to loss of potential areas for future urban land uses and associated local revenue sources not manifesting.

7.4.4 Protect and Improve Water Quality

No environmental impacts associated with improving water quality have been identified. Compliance with water quality regulations may result in costs associated with change in operations, pollution abatement equipment and/or monitoring and reporting costs.

7.4.5 Improve Flood Management

Depending on the specific projects implemented, increased short-term construction and site-specific impacts may occur when flood management projects are constructed. Impacts could include temporary disturbance of existing habitat, equipment emissions and local sedimentation.

7.4.6 Emergency Preparedness

No environmental impacts associated with improving emergency preparedness have been identified. Some emergency preparedness activities (such as drills or development of mutual aid agreements) may have minor costs associated with them.

7.4.7 Maintain and Enhance Water and Wastewater Infrastructure Efficiency and Reliability

Improved infrastructure efficiency may be the result of changes in operation or physical modifications. Operational improvements may require system optimization studies and extensive modification of operational procedures. Both of these steps would have a cost associated with them which may be recovered through lower operating costs.

If operational improvements required physical modifications, short term construction related impacts could occur. Depending on the nature of the facility, short term construction-related impacts would include air quality emissions, noise and increased traffic.

7.4.8 Plan For and Adapt to Climate Change

No environmental impacts associated with adapting to climate change have been identified. Climate change adaptation studies may result in costs associated with the studies themselves and with any necessary change in operations.

7.4.9 Ensure Equitable Distribution of Benefits

No environmental impacts or significant costs associated with ensuring equitable benefits have been identified.

7.5 Project Benefits and Impacts

This section presents a summary of potential benefits and impacts associated with the implementation of 136 stakeholder-identified projects included in this plan. Table 7.2 provides a listing of the projects. Since the list of implementation projects may change as the IRWM planning effort matures; it is not practical to provide an extensive analysis of impacts and benefits within the IRWM Plan. Additional and more detailed evaluation of impacts would occur as each project is developed. A more detailed discussion of project benefits and costs would occur during project development and would be the basis of any decision making body approval. More detailed environmental analysis would be required pursuant to State (e.g. CEQA) and federal law and would be performed as part of permitting for actual project implementation.

Table 7.2 lists all 136 projects by regional objectives that correspond with the primary function of the project, however, most projects meet multiple objectives. The benefits and impacts are summarized for each project. Table 7.2 also provides potential benefits and impacts for each project along with the names of the project sponsors, the watershed in which the project is located, the primary objective achieved by each project, and the project description.

Table 7.2: IRWM Plan 2013 Project Benefits and Impacts

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Recycled Water Facilities Upgrade	City of Guadalupe (DAC)	Santa Maria	Increase water supply	The existing WWTP would need to be upgraded to produce effluent meeting the requirements of Title 22 of the California Code of Regulations. Anticipated recycled water process systems to be added to the WWTP include: secondary effluent lift pumps, packaged flocculation system, packaged filtration system, disinfection, on-site recycled water storage in the one of the abandoned AIPS ponds, recycled water distribution pump station, and recycled water distribution piping.	Decreased need for imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and increase operational costs
Santa Maria Valley Groundwater Banking Feasibility Study	City of Santa Maria (DAC)	Santa Maria	Increase water supply	This study will investigate the feasibility of banking water in the ground for future use	Improved reliability in case of disruption of imported supply	
State Water Supply Augmentation	City of Santa Maria (DAC)	Santa Maria	Increase water supply	This project involves securing additional State Water Supply to improve regional water supply reliability, address salts issues associated with domestic supply water softeners, and help meet wastewater treatment effluent water quality regulatory limits.	Increased available water supply to meet greater demand	
Twitchell Reservoir Sedimentation Removal	City of Santa Maria (DAC)	Santa Maria	Increase water supply	This project will remove sediment from the Reservoir and associated outlet facilities.	Increased available water supply to meet greater demand	Construction related emissions, traffic, construction costs
Irrigation System Improvements and BMPs on Orchards in Santa Barbara County	Cachuma Resource Conservation District	Santa Maria, Cuyama, San Antonio, Santa Ynez, South Coast	Increase water supply	This project would improve irrigation & nutrient management on orchards with steep slopes and/or adjacent to riparian areas, primarily on the South Coast. BMPs would address irrigation and fertilizer practices, runoff management and erosion. Site specific evaluations would allow for recommendations for irrigation system upgrades based on audit and self-assessment information. Priority provided to orchards with greatest potential for reducing water consumption and improving storm water quality.	Decreased need for imported supplies through agricultural conservation and improved water quality	
Construction of Well #10-Augment Water Supply during a Drought	City of Lompoc (DAC)	Santa Ynez	Increase water supply	Well #10 is required to augment the supply of water during drought periods, when individual wells experience deeper static levels, pumping levels, and diminished capacity. Current well field contains several wells in excess of 47 years old with diminishing water yields.	Decreased need for imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction costs
New River Wells & Water Treatment Plant Project	City of Solvang	Santa Ynez	Increase water supply	The project consists of 3 primary components: wells, waterlines, and a water treatment plant. New wells will be installed along the north bank of the Santa Ynez River to extract river underflow. A treatment plant will be constructed in City owned open space along Alisal Rd. Waterlines will be constructed to convey the raw well water and treated water. The wells will have a combined design capacity of 1,500 gpm. The treatment plant will have a design capacity of 2 MGD.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and increase operational costs
Water Treatment Plant Facilities Expansion	City of Buellton	Santa Ynez	Increase water supply	The Project includes test drilling at 3 various city locations to finalize location of new ground water wells and new water treatment plant. Scope of work includes engineering design, construction, and construction management.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and operational costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Recycled Water Enhancement Project	City of Santa Barbara	Santa Ynez, South Coast	Increase water supply	Upgrade of the recycled water treatment plant to increase reliability and decrease the need to blend recycled water with potable water. It is projected that this project will increase the City's ability to reliably produce recycled water by approximately 800 AF/Yr.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and operational costs
Groundwater Management Enhancement and Expansion	Goleta Water District		Increase water supply	Improvements to groundwater facilities and infrastructure that enhance the District's ability to actively manage the groundwater basin and maximize available water supplies. Examples of specific activities include rehabilitating existing Aquifer Storage & Recovery wells, constructing new monitoring, injection and extraction wells, relocating and/or installing new pump stations, and completing the necessary planning and regulatory studies associated with these activities.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and operational costs
Twitchell Reservoir Sedimentation Management and Removal	City of Santa Maria (DAC)		Increase water supply	This project will continue to investigate and implement best practices to remove and prevent sediment deposits in the Reservoir and associated outlet facilities.	Increased available water supply to meet greater demand	Construction related emissions, traffic, construction costs
Central Irrigation Control System	City of Santa Maria (DAC)	Santa Maria	Reduce water demand	This project would install new and improve existing irrigation control systems that are used to control irrigation of City of Santa Maria parks and facilities.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Installation costs
Commercial and Industrial Water Conservation Program	Santa Barbara County Water Agency	Santa Maria, Santa Ynez, South Coast	Reduce water demand	This project will support water use efficiency surveys, reporting, and incentives for large and complex commercial and industrial facilities in Santa Barbara County. The SBCWA would assist participating water providers by contracting with a qualified consulting firm who will help their customers assess water use, determine site specific improvements, and implement cost effective water conservation projects, while developing long-term institutional knowledge for the water providers.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Program costs
Extreme Landscape Makeover for Schools and Parks	Santa Barbara County Water Agency	Santa Maria, Santa Ynez, South Coast	Reduce water demand	This grant would provide expertise and funding to reduce irrigation water use and runoff for up to 30 schools, parks, and other high-traffic public facilities in Santa Barbara County. These facilities often do not have the funds to act even on cost effective recommendations to existing facilities. Actions may include an irrigation audit, irrigation efficiency improvements, turf removal, installation of water wise plants, rain gardens, and other LID techniques, as well as hands on workshops.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Program costs
Low Income Residential Water Audit and Improvement Program	Santa Barbara County Water Agency	Santa Maria, Cuyama, San Antonio, Santa Ynez, South Coast	Reduce water demand	Provide funding, training, and resources for the Community Action Commission (CAC) to assist qualified low income community members in Santa Barbara County with water efficiency and urban runoff prevention. Expand CAC's existing weatherization program to provide indoor and landscape related water efficiency assessments, simple repairs, water efficiency upgrades, and outreach materials.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Program costs
AMI Pilot Project	City of Santa Barbara	South Coast	Reduce water demand	The AMI Pilot Project will use advanced metering infrastructure (AMI) which will enable two-way communications with City of Santa Barbara water customers' meters resulting in significant water savings as a result of real time tracking of both water usage on the customer end as well as tracking water loss in the distribution system.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Installation costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Phase 3 Recycled Water System Expansion	City of Santa Barbara	South Coast	Reduce water demand	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 constructs extensions of the system to allow additional use of recycled water in support of local and State policies in support of recycled water use. Four branches have been conceptually identified for extension: Franklin area, Alameda/Courthouse, Cemetery and La Cumbre Golf Course.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and increase operational costs
Recycled Water Pump Arc Flash Improvements	Goleta Water District	South Coast	Reduce water demand	Arc flash improvements to the electrical equipment of the Hollister recycled water booster pump station to comply with the National Fire Protection Association (NFPA) standards, eliminate the risk of high voltage electrical equipment explosions, and ensure the continued operation of the recycled water pumps.	Improved reliability and public safety	Installation costs
Agricultural Water Use Efficiency Project	Goleta Water District		Reduce water demand	Through the use of innovative technology, incentives and outreach targeted to Goleta Water District's agricultural community, this project will improve the efficiency of agricultural water use, which comprises 20% of the District's water sales, to conserve available supplies and ensure continued reliability of local water resources.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	
Recycled Water Distribution System Improvements for Reliability & Expanded Use	Goleta Water District		Reduce water demand	This project will improve and expand existing recycled water distribution pipelines and facilities to maintain uninterrupted service to existing customers and expand service to new customers. Examples of improvements include cathodic protection of RW waterlines, relocation of an underground booster pump station to an above-ground location, relocation of a PR vault for easier access, backup connection to the potable distribution system, and extension of existing recycled waterlines.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Construction related emissions, traffic, construction and increase operational costs
Water Conservation Program Implementation	Goleta Water District		Reduce water demand	An active water conservation program allows the District to stay in compliance with state policies, meet community and environmental preservation goals and remain a trusted steward of water resources. Through the development and implementation of water efficiency incentives, programs, demonstration projects, and targeted education and outreach, the goal of this project is to achieve customer water use reductions and conserve local water supplies.	Decreased imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Program costs
Regional Habitat Conservation Bank for Endangered Species	Regional	Santa Maria, San Antonio	Practice resource stewardship	The creation of a mitigation bank for impacts in endangered species habitat areas. A fee acquisition or conservation easement would be completed and transition of ownership to a recognized bank operator such as the California Rangeland Trust or other acceptable agency. The creation of the bank would include funds to establish an endowment.	Reduced invasive species; enhanced habitat for endangered species; increased passive recreational opportunities; Improved surface water quality; improved habitat corridors; increased augmentation of stream flows; increased integrated flood management and reduced flood risk; increased educational areas	Increased short-term construction and site-specific impacts; program costs; loss of potential for future urban land uses and associated local revenue
Buellton River Trail	City of Buellton	Santa Ynez	Practice resource stewardship	The Project will design and install a natural trail system between River View Park and Ave of Flags. It will include Trail Heads and water quality/habitat/natural resource educational display boards/signs and fencing. The City has acquired Trail easements through most of the properties along the south City limits.	Increased active and passive recreation; Increased educational areas	Increased short-term construction and site-specific impacts; project costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Demonstration Gardens and Landscape Conservation Program	City of Buellton	Santa Ynez	Practice resource stewardship	The Project will design and install demonstration gardens on sustainable and native vegetation at City Hall. The Project will also create and provide literature to assist residents and businesses to modify their landscaping and also provide a funding source to encourage the community to implement these water conservation features.	Increased passive recreation; Increased educational areas	Increased short-term construction and site-specific impacts; program costs
Fish Passage Improvement on Crossing 3, Quiota Creek	Cachuma Operation and Maintenance Board	Santa Ynez	Practice resource stewardship	The project will replace a concrete at-grade road crossing with a 60-foot bottomless-arched culvert (bridge). It will restore a natural stream channel and continuous riparian corridor that will allow for juvenile and adult passage for the endangered southern steelhead while improving road access and safety. The project design confirms with California Department of Fish and Game, the National Marine Fisheries Service and Santa Barbara County design criteria and fish passage guidelines.	Enhanced habitat for endangered species; increased passive recreational opportunities; improved habitat corridors; and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts
Andree Clark Bird Refuge Water Quality and Habitat Enhancement Project	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to develop and implement a water quality and habitat enhancement project at the Andree Clark Bird Refuge that will improve water quality, restore native habitat and improve recreational opportunities for Santa Barbara residents and visitors.	Reduced invasive species; enhanced habitat for endangered species; improved passive recreational opportunities; Improved surface water quality; improved habitat corridors; increased potential for integrated flood management and reduced flood risk; increased potential educational areas	Increased short-term construction and site-specific impacts; project costs
El Estero Swale Restoration Project	City of Santa Barbara	South Coast	Practice resource stewardship	This project will rehabilitate and enhance degraded wetlands on the south end of the El Estero Treatment Plant. The area is classified as habitat for endangered turtle species.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; Improved receiving water quality; Improved habitat corridors; increased potential for integrated flood management and reduced flood risk; increased potential educational areas	Increased short-term construction and site-specific impacts; project costs
Highway 192 at Mission Creek Fish Passage and South Coast Conduit Relocation Project	Cachuma Operation and Maintenance Board	South Coast	Practice resource stewardship	The project will modify an existing concrete apron downstream of the Hwy 192 Bridge over Mission Creek by installing a constructed riffle-ramp-pool sequent to allow for upstream/downstream migration of juvenile and adult endangered southern steelhead. Below the apron is the South Coast Conduit (a 36-inch water delivery main line for the region) that will be lowered below the stream grade. The structural integrity of the bridge, apron and the stream geomorphic continuity will be maintained.	Enhanced habitat for endangered species; improved habitat corridors; Increased integrated flood management and reduced flood risk; increased educational areas	Increased short-term construction and site-specific impacts; project costs
Las Positas Valley Restoration	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to restore the riparian corridor in the lower Las Positas Valley. Restoration will include non-native weed removal and revegetation with native plants, biotechnical stabilization of eroding banks, removal of concrete from the creek channel, and improvement of trails and interpretive information.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; Improved receiving water quality; improved habitat corridors; increased integrated flood management and reduced flood risk; increased educational areas	Increased short-term construction and site-specific impacts; program costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Lower Arroyo Burro Restoration Project	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to restore the riparian corridor along Arroyo Burro in the lower Las Positas Valley. Restoration will include non-native weed removal and revegetation with native plants, biotechnical stabilization of eroding banks and creek bed, removal of concrete and pipe and wire revetment from the creek channel, modify existing grade control structures, and improvement of trails and interpretive information.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; Improved receiving water quality; improved habitat corridors; increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; program costs
Mid-Arroyo Burro Restoration Project	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to restore the riparian corridor along the middle reach of Arroyo Burro. Restoration will include non-native weed removal and revegetation with native plants, biotechnical stabilization of eroding banks and creek bed, removal of concrete and pipe and wire revetment from the creek channel, modifying existing grade control structures, and improvement of trails and interpretive information.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; improved surface water quality; improved habitat corridors; Increased integrated flood management and reduced flood risk; increased educational areas	Increased short-term construction and site-specific impacts; program costs
Mission Creek Restoration and Steelhead Passage Project	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to improve passage for the endangered steelhead trout through a mile long concrete flood control channel. The design will create a low flow channel and resting areas within the bed of the concrete channel. The project will provide the proper water depth to allow fish to migrate upstream during low flows as well as provide reduced velocities and resting areas for upstream migration during higher flow events, while maintaining flood capacity in the channel.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; improved surface water quality; improved habitat corridors; increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; project costs
South Coast Steelhead Recovery	South Coast Habitat Restoration	South Coast	Practice resource stewardship	The purpose of this project is to improve upstream migration for the federally endangered steelhead trout by removing two instream impediments located on private agricultural lands in the Carpinteria and Maria Ygnacio Creek watersheds. The project will install two clear span bridges to replace the barriers to improve access for agricultural management. In addition, the project will improve instream water quality conditions by planting native vegetation in the project areas of disturbance.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; improved surface water quality; improved habitat corridors; Increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; project costs
Sycamore Creek Restoration Project	City of Santa Barbara	South Coast	Practice resource stewardship	The purpose of this project is to restore the riparian corridor along Sycamore Creek. Restoration will include non-native weed removal and revegetation with native plants, biotechnical stabilization of eroding banks and creek bed, removal of concrete and other debris from the creek channel, and improvement of trails and interpretive information.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; improved surface water quality; improved habitat corridors; increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; project costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Tajiguas Creek Steelhead Recovery	South Coast Habitat Restoration	South Coast	Practice resource stewardship	The purpose of this project is to improve upstream migration for the federally endangered steelhead trout by removing four instream impediments located on private agricultural lands in the Tajiguas Creek watershed along the Gaviota Coast. The project will install two clear span bridges at two of the barriers to improve access for agricultural management. In addition, the project will improve instream water quality conditions by planting native vegetation in the project areas of disturbance.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; Improved surface water quality; Improved habitat corridors; Increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; project costs
Watershed Invasive Plant Removal Program	City of Santa Barbara	South Coast	Practice resource stewardship	The project includes removal of invasive plant species at various locations along the creek corridors within the City of Santa Barbara. The project also includes replacement of invasive plants with native plants. Where possible, the project 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.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; Improved surface water quality; Improved habitat corridors; Increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; project Costs
Mission Creek Lagoon/Laguna Creek Restoration and Management Project	City of Santa Barbara		Practice resource stewardship	This is a creek, estuary and dune restoration project. The project will remove non-native plants and replace them with native vegetation. The project will also remove sections of concrete channel in the creek and replace them with biotechnical stabilization. The project design includes elements that will improve flood control, sediment management, and protect nearby infrastructure. The project will also improve water quality, and habitat for the endangered tidewater goby and steelhead trout.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; reduced bank erosion; improved surface water quality; improved habitat corridors; Increased integrated flood management and reduced flood risk; Increased educational areas	Increased short-term construction and site-specific impacts; program costs
Santa Ynez River Tamarisk and Arundo Project	County of Santa Barbara Agricultural Commissioner's Office		Practice resource stewardship	The Agricultural Commissioner proposes to apply herbicides to control the California Code of Regulations Section 4500 listed noxious weeds, Arundo donax and Tamarix ramosissima, along the riparian corridor of the Santa Ynez River.	Reduced invasive species; enhanced habitat for endangered species; enhanced passive recreational opportunities; improved surface water quality; improved habitat corridors; increased water supply due to reduction of water losses; increased for integrated flood management and reduced flood risk; increased educational areas	Increased short-term equipment related impacts depending on technique used; project costs
Agricultural Tailwater Treatment	City of Santa Maria (DAC)	Santa Maria	Improve water quality	This project would treat agricultural tailwater to improve water quality. Example Feasibility analysis attached for illustrative purposes only.	Reduced levels of NO2, TDS and other pollutants; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Groundwater Treatment	City of Santa Maria (DAC)	Santa Maria	Improve water quality	Provide treatment for the City's groundwater supply to remove TDS and nitrogen, and includes well installation and improvements to existing wells to produce a higher domestic supply water quality to reduce the need to remove additional contaminants (such as water softener salts) through wastewater treatment.	Increase water supply; improve quality of groundwater recharge; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Salt & Nutrient Management Plan Mitigation Measures	City of Santa Maria (DAC)	Santa Maria	Improve water quality	This project would implement mitigation measures recommended in the Salt & Nutrient Management Plan. An example of a project that could be implemented is Water Softener rebates.	Improve quality of groundwater recharge; meet Basin Plan objectives; protect beneficial uses	

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Water Infiltration Basin Improvements	City of Santa Maria (DAC)	Santa Maria	Improve water quality	This project would install new basins and improve the operations of existing basins to capture and infiltrate water into the ground.	Improve quality of groundwater recharge; meet Basin Plan objectives; protect Beneficial uses	Increased short-term construction and site-specific impacts; Project costs
Water Quality Treatment - LID	City of Santa Maria (DAC)	Santa Maria	Improve water quality	This project would treat water with Low Impact Development (LID) best management practices to improve water quality. Tasks included with this project may include retrofitting of City facilities and demonstration projects to determine effectiveness of methods implemented.	Increase water supply; improve quality of groundwater recharge; meet Basin Plan objectives	
WWTP Effluent Disposal Facility Improvements	City of Guadalupe (DAC)	Santa Maria	Improve water quality	Install approx. 3,000-ft of buried HDPE or PVC effluent conveyance pipeline between the WWTP and the effluent holding ponds. Upgrades to the irrigation pump station including a ventilation-controlled enclosure for the existing VFDs & rehabilitation/replacement of discharge pressure filters. Install a new, buried spray irrigation system	Improve quality of groundwater recharge; meet Basin Plan objectives; protect beneficial uses	Increased short-term construction and site-specific impacts; project costs
Livestock & Land	Cachuma Resource Conservation District	Santa Maria, Cuyama, San Antonio, Santa Ynez, South Coast	Improve water quality	This project would help meet Central Coast Regional Water Quality Control Board "Basin Plan" water quality objectives and TMDLs by working with equestrian/livestock facilities to implement Best Management Practices (BMPs) and improve resource stewardship. This project would achieve immediate and cumulative reductions in nutrient, sediment and pathogen pollution to surface and groundwater, adding to current efforts to replace substandard septic systems and reduce agricultural runoff.	Increase water supply; improve quality of groundwater recharge; meet Basin Plan objectives	
Clean Streets Program	Santa Barbara County Project Clean Water	Santa Maria, San Antonio, Santa Ynez, South Coast	Improve water quality	The project would provide expanded street sweeping services to commercial areas of Santa Barbara County to reduce storm water pollution and improve creek and ocean water quality.	Improve quality of stream flow; improve quality of groundwater recharge; meet Basin Plan objectives	Project Costs
Biological Nutrient Removals (BNR) Improvements	City of Buellton	Santa Ynez	Improve water quality	The project includes the design and construction of improvements to WWTP processes: aeration tanks, secondary clarifiers, RAS pumping station.	Improve quality of groundwater recharge; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Blending Station Project	City of Buellton	Santa Ynez	Improve water quality	This Project includes the design and construction of a blending station and appurtenant pipeworks to treat groundwater and blend with state water to ensure consistent water deliveries to the community.	Improve quality of supplies provided to customers; meet secondary standards; Improve reliability	Increased short-term construction and site-specific impacts; Project costs
Los Olivos Wastewater Collection and Treatment Facility	County of Santa Barbara Public Health Department	Santa Ynez	Improve water quality	Installation of collection, treatment and disposal facilities to replace substandard septic systems.	Improve quality of groundwater recharge; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Self-Regenerating Water Softener (SRWS) Rebate/Replacement Program	City of Solvang	Santa Ynez	Improve water quality	The Solvang WWTP effluent water has exceeded the sodium and chloride limit specified in its Waste Discharge Permit and the City's Salt Management Program (2011) identified self-generating water softeners as a significant contributor of salt (TDS, sodium, and chloride) loading to the Solvang WWTP. The ability to eliminate and/or replace antiquated softening systems with new technology will greatly improve the likelihood of meeting effluent limits.	Improve quality of groundwater recharge; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
SWMP Program Implementation	City of Buellton	Santa Ynez	Improve water quality	The Project implements the unfunded mandate to design/monitor and control stormwater runoff and will fund the City's SWMP program.	Improve quality of surface flow and groundwater recharge; meet Basin Plan objectives	

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
SWMP/SSMP Implementation	City of Buellton	Santa Ynez	Improve water quality	The Project consists of maintenance implementation to comply with the City's SWMP and SSMP. This will include the acquisition of appropriate equipment such as a vac-con truck and camera system for inspection and cleaning of sewer lines and storm drain system, and include manhole sniffer for safety.	Improve quality of groundwater recharge; Improve system reliability; meet Basin Plan objectives	
Braemar Area Sewer Extension Project	City of Santa Barbara	South Coast	Improve water quality	Extension of the City's sewer system to serve approximately 100 properties not currently served by municipal sewer. A preliminary feasibility 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.	Improve quality of groundwater recharge; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; Project costs
Corona Del Mar Water Treatment Plant Backwash Basin Improvement Project	Goleta Water District	South Coast	Improve water quality	Located at the Corona Del Mar Water Treatment Plant, the project involves, (1) installation of redesigned piping, baffles, and other system improvements to improve the operation and efficiency of the existing Filter Backwash Recovery Basin (backwash basin), and (2) construction of a new overflow basin to serve as an all purpose sludge, backwash water, and storm water storage area.	Improve quality of supplies provided to customers; meet secondary standards; Improve reliability	Increased short-term construction and site-specific impacts; Project costs
Corona Del Mar Water Treatment Plant Filter Media Replacement Project	Goleta Water District	South Coast	Improve water quality	Replacement of filter sand and granular activated carbon (GAC) filtering material in six filters at the Corona Del Mar Water Treatment Plant. Carbon filter treatment deodorizes and removes turbidity from water.	Improve quality of supplies provided to customers; meet secondary standards; Improve reliability	
Corona Del Mar Water Treatment Plant Sludge Drying Beds Project	Goleta Water District	South Coast	Improve water quality	Reconstruction of three sludge drying beds at the Corona Del Mar Water Treatment Plant, including: excavation and removal of all material (sand, sludge and gravel); removal of sub-drain systems and liners; construction of new sub-drain pipeline systems; installation of impermeable bed liners; placement of sand and filter material and collection pipes above the liner.	Improve quality of supplies provided to customers; meet secondary standards; Improve reliability	Increased short-term construction and site-specific impacts; Project costs
Lower Reach Air Vac Valve/Blowoff Valve Replacement Project	Cachuma Operation and Maintenance Board	South Coast	Improve water quality	COMB's water distribution pipeline requires special valve designs to minimize the potential of cross connections. Many of the air vac valves and blow off valves are over thirty years old, corroded, and in poor condition. The air vac valves need to be replaced as well as brought above ground to meet state requirements. These replacements and upgrades will ensure the quality of water being distributed meets the required standards as well as improve the reliability of the system.	Improve quality of supplies provided to customers; meet secondary standards; Improve reliability	Increased short-term construction and site-specific impacts; Project costs
Northview Road Sewer Extension	City of Santa Barbara	South Coast	Improve water quality	Extending a sewer main from Calle Real along the length of Northview Road and connecting existing homes currently on septic	Improve quality of groundwater recharge; Improve system reliability; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; Project costs
Storm Water Treatment Retrofit Project	City of Santa Barbara	South Coast	Improve water quality	The purpose of this project is to design, permit, and construct "Low Impact Development" retrofit (storm water and urban run-off treatment) projects on publicly-owned property to reduce storm water pollution and improve creek and ocean water quality.	Improve quality of groundwater recharge; Improve system reliability; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; Project costs
Recycled Water Treatment Upgrades for Expanded Use	Goleta Water District		Improve water quality	To serve certain commercial and agricultural users, recycled water would require some level of microfiltration (MF) and reverse osmosis (RO) treatment to reduce the total dissolved solids (TDS) levels to acceptable levels and to address potential constituents of emerging concern (CECs). This project will upgrade the wastewater treatment plant at Goleta Sanitary District to treat water to MF/RO standards, which will increase usage opportunities and conserve potable water.	Increase water supply; Improve quality of groundwater recharge; meet Basin Plan objectives	

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Salt and Nutrient Management Plan	Goleta Water District		Improve water quality	This project will involve the collaboration of various stakeholders to develop the state-mandated Salt & Nutrient Management Plan for the Goleta Groundwater Basin, which provides water to 87,000 people in the Goleta Valley. Components of the SNMP will include a basin description, source analysis, basin-wide monitoring plan, goals & objectives, and an implementation plan.	Increase water supply; improve quality of groundwater recharge; meet Basin Plan objectives	
Storm Water Litter Control	City of Santa Maria (DAC)	Santa Maria	Improve flood management	This project would include feasibility studies, design and construction to reduce litter in stormwater.	Meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Stowell Road Drainage Improvements	City of Santa Maria (DAC)	Santa Maria	Improve flood management	This project will install drainage improvements at the intersection of Stowell and Black Roads to alleviate flooding.	Reduced risk to property and life; increased multiple benefits of individual projects	Increased short-term construction and site-specific impacts; project costs
Second Street Drainage Improvement Project	City of Solvang	Santa Ynez	Improve flood management	The project will replace undersized storm drain lines and catch basins with larger facilities to increase the capacity of the storm drain system around and through the downtown area of Solvang including portions of State Highway 246 through Solvang.	Reduced risk to property and life; increased multiple benefits of individual projects; increased water supply; increased water quality enhancement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Storm Drain Inlet Retrofits	City of Buellton	Santa Ynez	Improve flood management	The City has 180 drainage inlets and catch basins that are publicly maintained. As part of its efforts to clean and remove debris and to increase safety, the City will be installing safety bars and grates, which would prevent large objects, debris from entering the storm drain system.	Reduced risk to property and life; increased multiple benefits of individual projects	
Beach Area Drainage Improvements	City of Carpinteria	South Coast	Improve flood management	Implementation of drainage upgrades in the beach neighborhood to address chronic flooding which damages infrastructure. Through a combination of system upgrades, new facilities, and low impact development design, this project will improve flood control and address other problems associated with the high groundwater table and aging infrastructure.	Reduced risk to property and life; increased multiple benefits of individual projects; increased water supply; increased water quality enhancement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
East Via Real Storm Water Treatment Project	City of Carpinteria	South Coast	Improve flood management	This project will upgrade existing storm drain structures to accommodate the high rate of concentration along Via Real, currently overwhelmed during rain events, causing extreme erosion and sediment discharge. The existing structures will be upgraded and LID incorporated to infiltrate and accommodate overflow, which currently runs across the adjacent agricultural fields, causing erosion and picking up sedimentation and pesticides, which discharge onto Via Real and from there to Carpinteria Creek	Reduced risk to property and life; increased multiple benefits of individual projects; increased water supply; increased water quality enhancement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Las Vegas - San Pedro Creeks Capacity Improvement Project - Phase 1	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	This project will construct a berm and flood wall along the westerly bank of San Pedro Creek downstream of the railroad bridge.	Reduced risk to property and life; increased multiple benefits of individual projects;	Increased short-term construction and site-specific impacts; project costs
Las Vegas - San Pedro Creeks Capacity Improvement Project - Phase 2	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	The purpose of the overall proposed project is to increase the conveyance capacity of San Pedro Creek from a 10-year to a 25-year storm event under the transportation corridors that include Calle Real, Route 101, and the Union Pacific Railroad in Goleta California. This project will specifically address the replacement of the Union Pacific Railroad bridge over San Pedro Creek to increase capacity.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Las Vegas - San Pedro Creeks Capacity Improvement Project - Phase 3	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	The purpose of the overall proposed project is to increase the conveyance capacity of Las Vegas Creek from a 10-year to a 25-year storm event under the transportation corridors that include Calle Real, Route 101, and the Union Pacific Railroad in Goleta California. This project will specifically address the replacement of the Union Pacific Railroad bridge over Las Vegas Creek to increase capacity.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Lower Mission Creek Flood Control & Restoration Project - Reach 1A, Phase 2	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	This project will complete Reach 1A of the overall Lower Mission Creek project. Reach 1A, Phase 1 was completed in 2011. Phase 2 will continue the improvements up to Mason Street. These include widening the creek channel, providing improved aquatic habitat and expanded riparian habitat along the creek banks.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Lower Mission Creek Flood Control & Restoration Project - Reach 1B	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	This project will widen the portion of Mission Creek between Yanonali and Mason Streets providing improved aquatic habitat and expanded riparian habitat along the creek banks.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Lower Mission Creek Flood Control & Restoration Project - Reach 2A	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	This reach of the overall Lower Mission Creek Flood Control and Restoration Project consists of the construction of a double box culvert connecting an existing box culvert, constructed under the Union Pacific Railroad in 2009, to the existing Mission Creek channel just south of Yanonali Street. This culvert will allow most of the creek flows in excess of 640 CFS to By-pass an existing box channel in Mission Creek that has limited flow conveyance capacity.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Lower Mission Creek Flood Control & Restoration Project - Reach 2B, Phase 2	Santa Barbara County Flood Control & Water Conservation District	South Coast	Improve flood management	This project will construct a box culvert and open channel from the existing box culvert at Montecito Street under US Hwy 101 and connect to the existing open channel upstream of the highway. This culvert will allow most of the creek flows in excess of 640 CFS to By-pass an existing box channel in Mission Creek that has limited flow conveyance capacity.	Reduced risk to property and life; increased multiple benefits of individual projects; water quality improvement; habitat enhancement	Increased short-term construction and site-specific impacts; project costs
Plant Facility Flood Protection	Laguna County Sanitation District (DAC community of Orcutt)		Improve flood management	Evaluation and implementation of flood mitigation facilities at the Laguna County Sanitation District wastewater reclamation facility.	Reduced risk to property, increased multiple benefits of individual projects; water quality improvement	
Tamarisk and Arundo Removal along the Santa Ynez River	Santa Barbara County Agricultural Commissioner		Improve flood management	A project is under way to remove Arundo in the fall of 2012 and 2013 but funding is needed for Tamarisk removal to assure eradication success for two years after the initial two years of treatment. The proposed project would have the following schedule 2013 and 2014 Tamarisk removal; 2014 and 2015 Arundo removal, follow-up year to assure eradication that would be done at the same time as the tamarisk removal; 2015 and 2016 Tamarisk removal, follow-up year to assure eradication.	Reduced risk to property and life; increased multiple benefits of individual projects; increased water supply; increased habitat	
Water Tower Repair Project	Cuyama Community Services District (DAC)	Cuyama	Improve operational efficiency, infrastructure, and transfers	Rehabilitation and recoating of water tower for water system and additional water storage.	Increased system reliability	

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Irrigation System for WWTP Discharge	Cuyama Community Services District (DAC)	Cuyama	Improve operational efficiency, infrastructure, and transfers	Install irrigation system to dispose of wastewater instead of discharge into creek.	Improve quality of groundwater recharge; meet Basin Plan objectives	
Backup Generator System	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Installation of backup generators.	Increased system reliability; protect water quality	Increased short-term construction and site-specific impacts; Project costs
East Side Wastewater Treatment Plant	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Installation of a package wastewater treatment plant primarily to serve the Lake Marie Estates housing development.	Increased system reliability; protect water quality	Increased short-term construction and site-specific impacts; Project costs
Recycled Water Pipeline Extension to Waller County Park Area	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Extension of existing recycled water distribution system to provide water for irrigation to Waller County Park and neighboring areas such as the Santa Maria Public Airport, Santa Maria Country Club, and Hagerman Fields. Facilities needed include pipeline, tanks, and pump stations. Evaluation and efficiency improvements may be included for sites currently irrigating with other water supplies such as Waller Park.	Decreased need for imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Increased short-term construction and site-specific impacts; Project costs
Recycled Water Pipeline Extension/Retrofit at Rancho Maria Golf Course	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Approximately 2 miles extension of 12" PVC recycled water main and on site irrigation system retrofit at the Rancho Maria Golf Course. On site work includes using existing facilities as well as adding a new pump station and holding pond. Onsite improvements would be intended to improve water use efficiency.	Decreased need for imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Increased short-term construction and site-specific impacts; Project costs
Sludge Drying Beds Improvements	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Replacement of existing earthen sludge beds with lined beds and supernatant return system.	Protect ground water quality	Increased short-term construction and site-specific impacts; Project costs
Untreated Water Landscape Irrigation Extension	City of Santa Maria (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	This project extends the City's existing untreated water landscape irrigation system to reach additional large landscaped areas, with the ultimate project connecting separate systems in the City to the groundwater header at the southern end of the system.	Decreased need for imported supplies; increased available water supply to meet greater demand; improved reliability in case of disruption of imported supply	Increased short-term construction and site-specific impacts; Project costs
UV Disinfection System Optimization Project	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Installation of a break tank and pump system to maintain constant feed of ultra-filtration effluent to an existing UV disinfection system. The UV system would be revalidated under NRWI Guidelines with the goal of reducing the power demand.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; Project costs
Waller/Stubbs Lift Station	Laguna County Sanitation District (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	Installation of 1,500 LF of gravity trunk sewer, a lift station and 3,350 LF of force main.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; Project costs

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WWTP Grit System and Influent Pump Improvements	City of Guadalupe (DAC)	Santa Maria	Improve operational efficiency, infrastructure, and transfers	The proposed project would prioritize improvements to improve reliability of the existing WWTP and reduce O&M efforts. The proposed improvements would consist of the following components: 1) Demolish the existing grit removal equipment and install new grit removal system including vortex grit propeller, grit pump, and grit classifier. 2) Remove and replace existing influent pumps, leaking valves, and rehabilitate for force main piping. Install new VFD on Pump No. 3.	Increased operational efficiency; improve water quality; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Santa Barbara County Water Loss Control Program	Santa Barbara County Water Agency	Santa Maria, South Coast	Improve operational efficiency, infrastructure, and transfers	This project will provide technical assistance to participating water purveyors in Santa Barbara County to identify and repair distribution system water losses and ensure accurate billing for delivered water. This project will follow American Water Works Association (AWWA) criteria and will provide key technical support to each purveyor's ability to address water losses now and in the future by establishing programs which increase operational efficiency and supply reliability.	Reduced system demand; reduction of imported supplies; increased available water supply to meet greater demand; Improved reliability in case of disruption of imported supply	
Booster Pump Station Improvements	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project will replace an old booster pump and replace housing facility for pumps so it is accessible. The project will also install a chlorine analyzer to check concentration levels.	Improved reliability of service to customers	Increased short-term construction and site-specific impacts; project costs
City of Lompoc Treatment Basin Upgrades	City of Lompoc (DAC)	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Water Treatment Plant Basins need to be upgraded. The treatment processing equipment of the flocculation and clarification basins need to be replaced and upgraded. The basins primary purpose is to enhance, allow the settling and removal of solids from the City of Lompoc's treated water prior to filtration. One basin will be upgraded and replaced over a two year period.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Covered Solids Handling Area Structure at WWTP	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	Build "Butler Building" (pole barn) around solids handling area to reduce odor, and to keep sludge dry during inclement weather thus reducing sludge transport costs. This will improve the operational efficiency of the WWTP.	Increase water quality and operational efficiency	Increased short-term construction and site-specific impacts; project costs
Electrical Upgrade at WWTP	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The project includes the testing of electrical system at wwtp and the repair and upgrade of the power supply, including the addition of back-up generators.	Increased operational efficiency; lower energy use; reduced GHG emissions.	
Improve Grit Removal System at the Lompoc Regional Wastewater Reclamation Plant (LRWRP)	City of Lompoc (DAC)	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The grit removal system needs to be improved at the Lompoc Regional Wastewater Reclamation Plant (LRWRP).The improvement of the grit removal system will reduce the maintenance effort by the staff at the LRWRP if it captures more or the electric power will be reduced.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
McMurray WTP Building Expansion	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project includes the design and construction of a Building at the McMurray Road Water Treatment Plant. The building will house the tools, equipment and supplies for the water treatment and distribution system.	Increased operational reliability and efficiency	Increased short-term construction and site-specific impacts; project costs

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New Reservoir 4 to Replace Cisterns	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Solvang Water System Master Plan Update (2011) identified this project to occur within five years. Replace old undersized cisterns with new 400,000 gallon reservoir to ensure capability to meet future summertime peak water demands. Install new waterline in Riley Road and relocate booster pumping station adjacent to new reservoir. This will improve fire protection to all customers south of the Santa Ynez River, including the WWTP.	Improved public safety; increased operational reliability	Increased short-term construction and site-specific impacts; project costs
Radio Read Meter Replacement Project	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The project involves the replacement of approximately 1,800 old and antiquated water meters ranging in size from 5/8" to 1" with new radio read meters.	Increased operational efficiency	Increased short-term construction and site-specific impacts; project costs
RAS/WAS Pump Replacements	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project includes the replacement of RAS/WAS pumps.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Reservoir 1 Roof Replacement	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Solvang Water System Master Plan Update (2011) identified this project to occur within five years. Replace reservoir roof with new roofing system. Reservoir 1 is a 600,000 gallon reservoir includes an adjacent zone 2 booster station, zone 3 booster station and a 4,000 gallon hydro pneumatic tank.	Improved operational efficiency	Increased short-term construction and site-specific impacts; project costs
Reservoir 2 Recoating Project	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	Recoat the Reservoir 2 interior and exterior, and perform interior piping repairs to ensure Reservoir achieves its full useful design life. Reservoir 2 is a 450,000 gallon reservoir.	Improved operational efficiency	Increased short-term construction and site-specific impacts; project costs
SCADA System Upgrade	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project includes the acquisition of a new SCADA system (equipment and software) for the City's water network and includes installation and implementation.	Improved operational efficiency	
Sewer Line Replacement	City of Lompoc (DAC)	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	Replace approximately 8,300 feet of old deteriorating sewer lines in Lompoc. Several miles of old, deteriorating clay sewer lines, some as old as 1916, have been identified in the City as needing replacement. Problem lines risk undesirable inflow and infiltration to the collection system, leaks to groundwater, overflows, and interference with treatment plant operations. This project phase addresses approximately one-quarter of the lines in question, and redirects some lines to improve flow.	Increased operational efficiency; improve water quality; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Sewer line Rehabilitation Project	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	Deteriorated sewer lines will be repaired or replaced, and locations of high infiltration will be repaired.	Increased operational efficiency; improve water quality; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Wastewater Treatment Plant Security Improvements	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project consists of the installation of a remote monitoring system, cameras and auto shut-off features to prevent sewage overflows.	Increased operational efficiency; improve water quality	

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Water Meter Upgrades	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project includes the acquisition and installation of smart meters to replace the existing 1600 water meters in the system. The new meters would allow for remote reading and instantaneous access to water usage.	Increased operational efficiency	Increased short-term construction and site-specific impacts; project costs
Water Treatment Plant Upgrades and Safety Improvements	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project will include various improvements to existing wwtp to replaces valves, replace tanks, pipework that has deteriorated, upgrade of the existing chemical process system from Chlorine Gas to Sodium Hypochlorite, interim include appropriate alarms, and replace existing deteriorating buildings.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Waterline from Alisal Road to WWTP	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Solvang Water Distribution System Evaluation (2008) identified the need for this project. A portion of the waterline serving the WWTP is undersized and unable to provide adequate pressure and fire protection. The waterline also needs to be relocated due to erosion exposing the pipe. An easement will need to be secured and a properly sized waterline installed further away from the Santa Ynez River.	Increased reliability; improved public safety	Increased short-term construction and site-specific impacts; project costs
WTP/WWTP Back-Up Power Generation	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project consists of the replacement and upgrade of existing generators at the City's WTP/WWTP. The generator will run all essential systems of the wastewater treatment plant when normal power is lost. The system will include fuel tank, automatic transfer switches and telemetry.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
WWTP Access Road Improvement Project	City of Solvang	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	Repair potholes and ruts in the existing dirt access road from Alisal Road to the Solvang WWTP, and construct concrete and AC pavement at entry gates to ensure all-weather access to the plant.	Reduced vehicle maintenance costs	Increased short-term construction and site-specific impacts; project costs
WWTP Building and Site Improvements	City of Buellton	Santa Ynez	Improve operational efficiency, infrastructure, and transfers	The Project consists of clearing and grading of the WWTP site and the construction of a new building which would provide office and lab space in addition to vehicle and equipment storage.	Improved operational efficiency	Increased short-term construction and site-specific impacts; project costs
City parking LID Project	City of Carpinteria	South Coast	Improve operational efficiency, infrastructure, and transfers	The proposed project includes design, permitting and implementation of an LID retrofit to the three downtown public parking lots in Carpinteria to address stormwater runoff.	Improve quality of surface water; reduce risk of flooding; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
El Estero advanced secondary treatment improvement project	City of Santa Barbara	South Coast	Improve operational efficiency, infrastructure, and transfers	Replacement of the aeration blowers that supply air to the secondary stage of the wastewater treatment process and modification of tanks to allow nitrification/denitrification of water during treatment. The project aims to improve the reliability and efficiency of the treatment process, producing wastewater effluent that is more suitable for use as recycled water.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Glen Anne Dam and Reservoir for Emergencies, Accountability, and Management, Seismic Project	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	The project consists of upgrading Glen Anne Reservoir and Dam to meet seismic regulations, replacement of the reservoir pump station to return flows to Goleta West and the South Coast Conduit to serve the 200,000 users that depend on this water source.	Increased operational efficiency; increased water supply; reduced imported supplies; improved reliability; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs

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Goleta Water District - City of Santa Barbara Interconnect Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Construction of a new high capacity connection (interconnect) between the water distribution systems of the Goleta Water District (GWD) and the City of Santa Barbara (SB). The project involves construction of approximately 700 feet of 20inch diameter PVC waterline, a large meter and a new booster station.	Improved water supply reliability; improved operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
North Portal Security Upgrade	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	The North Portal contains several COMB facilities: North Portal Control Station, Lake Intake Tower and Access Bridge, as well as the North Portal of the Tecolote Tunnel. These facilities are the most critical component of the conveyance system and are in need of upgrades. These facilities are the most remote and are the origin of all flows to Cachuma Operation and Maintenance Board's water distribution system. Security and reliability are important for continued operation of these facilities.	Improved reliability of supply, protect public health	Increased short-term construction and site-specific impacts; project costs
Palomino Road Sewer Main Extension	County of Santa Barbara Public Works Department	South Coast	Improve operational efficiency, infrastructure, and transfers	Sewer main extension to serve approximately 50 parcels currently on septic systems.	Improve quality of groundwater recharge; Improve system reliability; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Sheffield Tunnel Pipeline Replacement	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	The Sheffield Tunnel causes a hydraulic limitation in the lower reach due to having to limit operating pressure to ensure the integrity of the pipe. The pipe in the tunnel is a 6,000 foot, 30" pipe. By lining or replacing the pipe, the reliability would be improved eliminating the pressure limitation. It has been estimated to cost \$150/foot to repair. This project is required in order to meet peak demands in the lower reach and ensure reliability.	Improved water supply reliability; improved operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Tunnel Road Sewer main Extension	County of Santa Barbara Public Works Department	South Coast	Improve operational efficiency, infrastructure, and transfers	The project consists of extending the existing sewer main up Tunnel Road to serve homes currently on septic systems or existing lots that do not meet standards for septic systems.	Improve quality of groundwater recharge; Improve system reliability; Meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Upper Reach Pipeline lining and Creek Stabilization	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	The Upper Reach from Corona Del Mar Water Treatment Plant to Lauro Reservoir requires lining to continue to be a reliable conveyance system. The critical sections such as, under HWY 154, and sections with abandoned laterals would be the first focus for repairs and then, the entire 60,000 feet of pipe would be completed. Estimate of cost is \$300 per foot of pipeline equaling an \$18 million program	Improved water supply reliability; improved operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Upper Reach Second Barrel from Glen Anne Turnout to Corona Del Mar Water Treatment Plant	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	This project would complete the second 48" pipeline section that distributes water to the South Coast population of Santa Barbara County. This project will extend from Glen Anne Turnout to Corona Del Mar Turnout at approximately 6,700 feet in length. Two hundred thousand residents rely on the existing sixty year old pipeline for water distribution to the South Coast of Santa Barbara County. This new pipeline would be a redundant water supply to ensure reliability of the current system.	Improved water supply reliability; improved operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Cogeneration Unit	Goleta Sanitary District	South Coast	Improve operational efficiency, infrastructure, and transfers	Installation of cogeneration unit at WWTP	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs

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Corona del Mar Water Treatment Plant Infrastructure and Process Improvements	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Improvements to the District's Corona del Mar Water Treatment Plant to meet ongoing regulatory requirements and provide safe and reliable water supplies to the community. Planned activities include improvements to the backwash, sludge and overflow basins, sustainable wastewater disposal for irrigation, flocculation and sedimentation basin enclosure construction, access road improvements, and various other improvements recommended in a process study completed in Summer 2013.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Emergency Power Generation for Wells	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	This project involves installation of onsite generators needed to provide emergency power to the District's water production wells in the event of a power outage. In the absence of this emergency power source the wells could not function, which could interrupt customer water service, including fire protection.	Increased reliability; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Fire Protection Enhancement Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	This project involves installation of new fire hydrants in areas of the community most lacking in fire protection, and replacement of existing hydrants that are in poor operating condition. This project ensures there is an adequate supply of fire hydrants throughout the District's service area to provide fire protection for the community.	Improved public safety	Increased short-term construction and site-specific impacts; project costs
Lower Reach Lining and Creek Stabilization	Cachuma Operation and Maintenance Board	South Coast	Improve operational efficiency, infrastructure, and transfers	The Lower Reach consists of pipe sizes of 36 inches, 30 inches, and 27 inches. These pipes were installed in the 1950's and are nearing the end of their service life. Lining of these pipes would be the most cost effective method of repair. The length of the lower reach is 90,000 feet and due to the difficulty of construction in this area, the cost would be estimated at 200 dollars per foot. Total program would be \$18 million.	Increased operational efficiency; improved water supply reliability	Increased short-term construction and site-specific impacts; project costs
Material Way Creek Arial Crossing Sewer Replacement Project	Goleta Sanitary District	South Coast	Improve operational efficiency, infrastructure, and transfers	Replace sewer pipe and bridge which crosses San Antonio Creek.	Protect surface water quality; improve system reliability; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Modoc Road New Sewer Line Installation Project	Goleta Sanitary District	South Coast	Improve operational efficiency, infrastructure, and transfers	Re-line 5900 feet of sewer line along Modoc Road near Cieneguitas Creek.	Protect surface water quality; improve system reliability; meet Basin Plan objectives	Increased short-term construction and site-specific impacts; project costs
Recycled Water Distribution System Extension and Looping	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Replacement and relocation of the existing recycled waterline on the west end of the RW distribution system, including expanding the system further west to serve additional customers; and extension and looping of the RW system to the east to serve additional customers and significantly increase the reliability of the currently linear distribution system. The project will also expand the use of RW and further conserve potable water.	Decreased need for imported supplies; increased water supply to meet greater demand; improved reliability in case of disruption of imported supply	Increased short-term construction and site-specific impacts; project costs
Recycled Water Pump Upgrades Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Electrical improvements to two recycled water pump stations, including: 1) replacement of 4 Variable Frequency Drives (VFD) and outdated support equipment with 3 new Soft Start motor controllers, a new VFD pump controller, a new Programmable Logic Controller (PLC) at the Goleta Sanitary District booster pumping station, and 2) electrical support improvements designed to meet OSHA regulated NFPA 70E standards for arc flash protection at the GSD and Hollister pump station.	Increased operational efficiency; improved water supply reliability	Increased short-term construction and site-specific impacts; project costs

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Recycled Water Storage Facility for Expanded Use	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Goleta Water District's ability to fully utilize recycled water is limited by use patterns and insufficient storage capacity. While storage is available to address daily needs, it is not sufficient to address seasonal variability in irrigation demand. This project would construct a recycled water reservoir, enabling expanded recycled water use and potable water conservation. Location of the reservoir at a higher elevation will also reduce pumping needs and increase distribution efficiency.	Decreased need for imported supplies; increased water supply to meet greater demand; improved reliability in case of disruption of imported supply	Increased short-term construction and site-specific impacts; project costs
Recycled Waterline Relocation at Goleta Beach	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	This project involves relocation of Goleta Water District's recycled waterline where it traverses Goleta Beach to facilitate implementation of a new shoreline management strategy by the County of Santa Barbara. The project will protect the waterline from beach erosion, preventing potential environmental impacts from recycled water leaks due to waterline damage along the beach, and ensuring the viability of the recycled water supply.	Enhanced shoreline habitat; improved public recreation; improved RW reliability	Increased short-term construction and site-specific impacts; project costs
System Loss Reduction and Submetering Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Installation of new sub-meters and meters throughout the District's distribution system with state-of-the-art meter technology will capture accurate flow measurement and enable identification of excessive water losses. The project will ultimately result in water conservation through reduced system losses, thereby enhancing the protection of water supplies and the efficiency of the District's distribution system.	Increased operational efficiency; improved water supply reliability	Increased short-term construction and site-specific impacts; project costs
Water Distribution System Corrosion Protection	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Proactive protection of the District's steel pipe distribution infrastructure serving approximately 8,000 customer accounts prevents leaks and costly waterline breaks. Through upgrades to the cathodic protection system, this project will deter corrosion of steel piping and preserve pipeline infrastructure, reducing replacement and repair costs and increasing system reliability for customers into the future.	Increased operational efficiency; improved water supply reliability	Increased short-term construction and site-specific impacts; project costs
Water Distribution System Improvement and Reliability in a Disadvantaged Community	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Isla Vista is a densely populated urban neighborhood occupied primarily by working families and students of the neighboring university. Built in 1950's when the community population was much smaller, the District's distribution system serving this community is undersized and unreliable. This project will replace and upsize existing waterlines, connect dead end waterlines, and loop the water system, resulting in improved water quality, higher water pressure, and overall system reliability.	Increased operational efficiency; improved water supply reliability; enhanced public safety	Increased short-term construction and site-specific impacts; project costs
Water Storage Expansion Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Construction of a new potable water reservoir and related facilities that would provide the additional storage and pressure necessary to continue serving water to customers during a waterline failure, water treatment plant outage, or unplanned emergency. Current storage capacity is insufficient to serve customers with pressurized water for an extended period of time, including fire protection water. The additional storage facilities would enhance emergency preparedness and supply reliability.	Increased operational efficiency; improved water supply reliability; enhanced public safety	Increased short-term construction and site-specific impacts; project costs
Waterline Upsizing Project	Goleta Water District	South Coast	Improve operational efficiency, infrastructure, and transfers	Constructed in the 1950s when the area population was smaller, many of the District's waterlines are substandard in size for existing conditions. This project would replace six inch undersized pipelines with larger 10 inch to 20 inch pipelines that will provide increased water pressure to area homes and businesses and increase water flow to fire hydrants in this area to ensure sufficient fire protection.	Increased operational efficiency; improved water supply reliability; enhanced public safety	Increased short-term construction and site-specific impacts; project costs

Project Title	Project Sponsor	Watershed	Primary Objective	Project Description	Potential Effects Potential Benefits	Potential Impacts
Ellwood Hydroelectric Project	Goleta Water District	South Coast	Address climate change	Installation of a hydroelectric turbine generator at Goleta Water District's Ellwood Reservoir. The generator would utilize pressure and flowing water within the District's gravity fed distribution system to spin turbines and generate up to 348,000 kWh of electricity per year.	Increased operational efficiency; lower energy use; reduced GHG emissions.	Increased short-term construction and site-specific impacts; project costs
Renewable Energy Installations and Coordinated Energy Management	Goleta Water District	South Coast	Address climate change	Energy management projects will include utilizing an energy management software platform to track and document energy use and savings, installation of energy efficiency improvements at the District's administration buildings, and construction of renewable energy systems - including hydroelectric turbines and solar energy installations - to offset energy use and related costs while holding down rates for services provided to customers, consistent with the District's Sustainability Plan.	Increased operational efficiency; lower energy use; reduced GHG emissions.	