



Section I. Plan Benefits and Impacts

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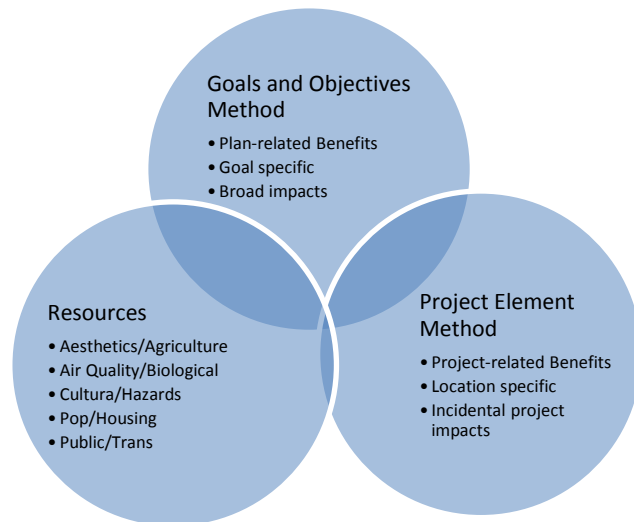
Section I. Plan Benefits and Impacts

This section contains a “high” level discussion of the plan implementation to help stakeholders to begin to understand the potential benefits and impacts of implementing the IRWM Plan within their respective Sub-Regions.¹ High level implies that the benefit/impact analysis is not extensive or exhaustive, but does provide sufficient detail to require updating as the plan matures, projects change, and plan performance is measured over time.

This section initially examines benefits and impacts using two methods. The first method considers the IRWM Plan’s overall Vision, Goals and Objectives and associates primary benefits and impacts to each. The second method expands upon the beneficial activities associated with each Project Element and ties each benefit, and impact, to a project(s) activity and region(s).²

IRWM Projects are tied to both methods by noting in ***bold-italic*** the projects which could potentially be affected by the listed benefits and impacts.

The last portion of this section provides a discussion of how the various natural and man-made resources will be affected by the IRWM Plan’s implementation. Regulatory permitting and mitigation measures are also discussed.



I.1 GOALS AND OBJECTIVES METHOD

The ultimate purpose of plan implementation is to provide benefits that support and achieve the overall IRWM Plan vision, and Goals and Objectives of the San Luis Obispo Region. Benefits

¹ Also includes potential impacts and benefits of Plan Implementation between regions with DAC/EJ concerns and Native American Tribal communities (see **Section C – Region Description** and **Section B.4.8.3 Tribal Councils** for discussion).

² Project Elements are described in **Section G – Project Solicitation, Selection, and Prioritization** and are linked with IRWM Projects satisfying one or more IRWM Goals and Objectives as explained in **Section H – Project Integration and Alternative**.

are to be accomplished through watershed stewardship and comprehensive management of water resources in a practical, cost effective, and responsible manner. The following section describes the potential benefits and impacts associated with implementation of the five recommended IRWMP Goals.³

1.1.1 Water Supply Goal

The Water Supply goal is intended to be an integrated regional water supply program that combines a variety of water management and infrastructure plans and projects to provide flexibility in water supply, increase reliability of supply, and reduce dependence on imported supplies throughout the region. The goal's focus is to improve water quantity and water quality for beneficial uses in the IRWM region. The types of plans and projects implemented for purposes of the Water Supply goal work together closely with other goals to protect the region's water resources. The primary benefits of the Water Supply Goal are:

- Protect and improve source water quantity and quality
- Meet all federal and state drinking water standards
- Implement inter-agency projects including emergency inter-ties between systems, jointly developed facilities, water exchanges, and other methods of enhancing reliability through cooperative efforts over the development of new supplies
- Maximize water conservation for both M&I and agricultural uses
- Expand desalination water opportunities by 2010
- Expand reclaimed water use to make up 10 percent of total water use by 2020
- Address Climate Change

The high priority projects implemented under the Water Supply Goal are:

- NCNT_WSP1 - City of Paso Robles Lake Nacimiento Water Treatment Plant Construction
- NCNT_WSP2 - San Miguel Critical Water System Improvements
- SCNT_WSP2 - Recycle Water Distribution System Expansion
- SCNT_WSP4 - Pismo Beach Recycled Water Project

The Water Supply goal provides numerous benefits to the region as a whole, with some impacts to the locally affected communities and adjacent areas. **Table I-1** identifies potential benefits and impacts of implementing this goal.

³ Listed benefits are inherently associated with the Goal's Objectives. The difference is in the context of providing all benefits associated with the Goal from implementing IRWM projects.

Table I-1. Benefits and Impacts of the Water Supply Goal

Benefits and Impacts
<p>Benefits</p> <ul style="list-style-type: none"> • Improves water quality and brings low income communities in to compliance with drinking water standards. • Increases conservation and recycled water opportunities. • Improves water supplies and ensures their long term sustainability. • Reduces salts and nitrates in groundwater and drinking water supplies. • Improves effluent water quality and complies with new waste discharge requirements. • Facilitates actions to begin addressing Climate Change in the region. • Reduces point and non-point discharges to regional surface waters. • Develops strategies to share water resources regionally and implement inter-agency projects. • Facilitates inter-agency coordination on regional desalinization projects. • Increases local, reliable water supplies for the region available for transfer and banking. • Coordinated public education efforts regarding recycled water use. • Reduces demand for State Water Project water. • Optimizes the regional use of State Water Project water. • Improves conjunctive use of groundwater resources. • Improves local reservoir operation conditions. • Provides regional supply for future increased demands.
<p>Impacts</p> <ul style="list-style-type: none"> • Potential temporary impacts during construction. • Potentially significant financial impacts to benefit assessment region. • Potential environmental impacts from intake facilities and brine disposal.

1.1.2 Ecosystem and Watershed Restoration Goal

The Ecosystem and Watershed Restoration Goal is made up of plans and projects that protect, enhance, and restore the region’s natural resources. The primary benefits of the Ecosystem Program are:

- Purchase and conserve through easements, preserve, enhance, and restore land in ecologically sensitive ecosystems
- Manage public land access to encourage public involvement and stewardship
- Manage and restore ecosystems and stream flows to fish bearing streams, support a region-wide fish passage barrier prevention, circumvention and removal program, and implement fish-friendly stream and river corridor restoration projects
- Reduce the effects of invasive plant species, manage public properties to re-establish rare and special status native plant populations, and promote native drought tolerant plantings in municipal and residential landscaping
- Implement the San Luis Obispo County Native Tree Management Guidelines and promote the voluntary guidelines in the San Luis Obispo County Native Tree Resolution for tree protection and restoration programs, urban forest management, and wild lands fire management
- Support the development and implementation of TMDLs
- Conserve natural resources
- Improve the understanding of Climate Change through research and monitoring

The high-ranking projects, programs, and plans integrated into the Ecosystem Preservation and Enhancement Program are:

- **MLTP_ECO1 - Livestock & Land Program**
- **NCNT_ECO1 - North County Fertilizer Regions_ Precision Agriculture**
- **NCNT_ECO2 - Attiyeh Ranch Conservation Easement**

The Ecosystem and Watershed Restoration Goal provides numerous benefits to the region as a whole, with some impacts to the locally affected communities and adjacent areas. **Table I-2** identifies potential benefits and impacts of implementing projects under this goal.

Table I-2. Benefits and Impacts of the Ecosystem and Watershed Restoration Goal

Benefits and Impacts
<p>Benefits</p> <ul style="list-style-type: none"> • Promotes public awareness and involvement in estuarine management issues by regional stakeholders and tourists. • Protects the long term stability and protection of agriculture and open space throughout the region. • Protects wetland and riparian corridor protection and restoration, open spaces such as development of pocket parks and green belts in urbanized areas throughout the region. • Establishes policies and guidelines for the retention of storm water on-site for percolation, and utilization of Low Impact Development principles to ensure that proposed development conforms to good design and flood management standards. • Protects Coastal Waters from pathogen contamination. • Protects sensitive Coastal habitats. • Protects recreational value of the Coastal areas.
<p>Impacts</p> <ul style="list-style-type: none"> • Potential conflicts with individual agency plans and policies. • Potential temporary impacts during construction.

1.1.3 Groundwater Monitoring and Management Goal

The Groundwater Monitoring and Management Goal is designed to monitor, protect, and improve the region’s groundwater through a collaborative approach. The primary objectives of the Groundwater Program are:

- Develop monitoring and reporting programs for groundwater basins in the region
- Evaluate and consider Groundwater Banking Programs
- Protect and improve groundwater quality from point and non-point source pollution, including nitrate contamination; MTBE and other industrial, agricultural, and commercial sources of contamination; naturally occurring mineralization, boron, radionuclide, geothermal contamination; and seawater intrusion and salts
- Increase discharge of an improved quality of treated wastewater to maintain and protect existing groundwater supplies
- Conduct public education and outreach about groundwater protection
- Identify areas of known or expected conflicts and target stakeholders on specific actions that they should take to help protect groundwater basin quality and supply
- Recharge groundwater with high quality water

The high-ranking projects, programs, and plans integrated into the Groundwater Monitoring and Management Program are the:

- **NCNT_GWM1 - Upper Salinas River Basin Water Conservation/Conjunctive Use Project**
- **NCST_GWM1 - 8th Street Upper Aquifer Well and Nitrate Removal Facility**

The Groundwater Monitoring and Management Goal will provide numerous benefits to the region as a whole, with some impacts to the locally affected communities and adjacent areas. **Table I-3** identifies potential benefits and impacts of implementing projects under this goal.

Table I-3. Benefits and Impacts of the Groundwater Monitoring and Management Goal

Benefits and Impacts
<p>Benefits</p> <ul style="list-style-type: none"> • Develops a resource and groundwater management plan for the regionally significant groundwater basins. • Improves water supply reliability via greater flexibility to implement conjunctive use options between local groundwater supplies, desalination supply and imported State Water supply for the region. • Compiles regional information and identifies optimal recharge locations throughout the region. • Compiles region-wide information and identifies regional ordinance options for groundwater management. • Provides information necessary to cooperatively manage the groundwater basin to provide the maximum water supply benefits to the region.
<p>Impacts</p> <ul style="list-style-type: none"> • Potential conflicts with individual agency policies and ordinances.

1.1.4 Flood Management Goal

The Flood Management Goal is designed to implement an integrated, watershed approach to flood management throughout the region. The primary benefits of the Flood Management Goal are:

- Distinguish the root cause of flooding problems stemming from new development, existing development, and mandatory regulation
- Integrate ecosystem enhancement, drainage control, and natural groundwater recharge into development projects
- Develop financial programs for drainage and flood control projects
- Evaluate and minimize the risk of dam and levee failures, or other flood control structures
- Develop and implement public education, outreach, and advocacy on improved flood protection for low income areas

The high-ranking projects, programs and plans integrated into the Flood Management Goal are the:

- **NCST_FLD1 - Los Padres CCC Center - Stormwater LID Treatment Project**
- **SCNT_FLD2- Oceano Drainage Improvement Project - Hwy 1 & 13th Street**

The Flood Management Goal will provide numerous benefits to the region as a whole, with some impacts to the locally affected communities and adjacent areas. **Table I-4** identifies potential benefits and impacts of implementing this goal.

Table I-4. Benefits and Impacts of the Flood Management Goal

Benefits and Impacts
<p>Benefits</p> <ul style="list-style-type: none"> • Develops a regional model on how to approach flood management issues, including steps on how to integrate solutions for multiple benefits and community acceptance. • Cooperatively developed by the communities from Arroyo Grande to Oceano, the Coastal San Luis Resource Conservation District, and the San Luis Obispo County Flood Control and Water Conservation District for the benefit of those communities. • Eliminates redundancy of efforts by individual agencies allowing program cost reductions. • Cooperatively developed by the communities from San Luis Obispo to Avila Beach and the San Luis Obispo County Flood Control and Water Conservation District for the benefit of those communities. • Improves steelhead passage that benefits habitat value for the upper watershed.
<p>Impacts</p> <ul style="list-style-type: none"> • Potential temporary impacts during construction.

1.1.5 Water Resources Management and Communications Goal

The Water Resources Management and Communications Goal is designed to implement an integrated, watershed approach to Water Resources Management and Communications throughout the region. The primary benefits of the Water Resources Management and Communications Goal are:

- Develop financial programs for water, drainage and flood control projects
- Develop and implement public education, outreach, and advocacy for sustainable water resources management in low income areas

The high-ranking projects, programs and plans integrated into the Water Resources Management and Communications Goal are the:

- **MLTP_WMT2 - LID Pilot Program**
- **NCNT_WMT1 - Community Based Social Marketing**
- **NCNT_WMT2 - Improving On Farm Water Management Through Demonstration, Research & Outreach of Precision Agricultural Best Management Practices**
- **SCNT_WMT1 - Lopez Water Treatment Plant Membrane Rack Addition**

The Flood Management Goal will provide numerous benefits to the region as a whole, with some impacts to the locally affected communities and adjacent areas. **Table I-4** identifies potential benefits and impacts of implementing this goal.

Table I-5. Benefits and Impacts of the Water Resources Management and Communications Goal

Benefits and Impacts
<p>Benefits</p> <ul style="list-style-type: none"> • Provides reliable, consistent outreach in managing regional water supplies. • Brings those areas of the agricultural region to enable their long-term stability and productivity within the regional community along with urban and rural uses. • Reduces regional groundwater conflicts. • Eliminates redundancy of efforts by individual agencies allowing program cost reductions. • Provides policies and best management practices consistent with applicable IRWM goals and objectives. • Coordinates public education efforts with focused attention to low income areas. • Protects water resources for the beneficial use of regional stakeholders.
<p>Impacts</p> <ul style="list-style-type: none"> • Potential higher cost of water to maintain finance options and increased local funding.

I.2 PROJECT ELEMENT METHOD

The benefits from implementing the IRWM Plan are provided through the project activities grouped into the twelve (12) Project Elements listed in each table below. Each Project Element stems from the project-related objectives of the IRWM Plan’s Final Project List of 15 projects. Benefits are closely tied to the generic project outcomes. Related impacts are generally associated with local incidental or secondary construction-related activities or local tax, rate, and fee increases due to a higher cost in water from implementation of new projects and programs where local financing is obtained.

For each Project Element, one or more “beneficial” outcome can be created through project implementation. Likewise, one or more incidental or secondary “impact” can also be created. **Figure I-3** uses the Pismo Beach Recycled Water Project as an example where the project is held against all associated Project Elements (i.e., those with red line) and the list of benefits and impacts is created by simply collecting the list of benefits and impacts.

The Project Element Method is used as a means to relate benefits and impacts to the actual IRWM project activities (i.e., what is the project actually doing to result in a benefit (or impact)) and to the region(s) most affected. What follows is a series of tables identifying the potential list of beneficial activities and incidental or secondary impacts to assess the best possible outcome of implementing the Project Elements, and where those outcomes will likely take place. This approach stops short of closely assessing each project (i.e., such as publishing a project benefit and impacts list) to maintain the high level of planning, and to ensure the effort to be done with the project’s implementation and environmental compliance process is not affected. The Final Project List projects are identified in the tables, however, to assist in associating the specific benefits listed under each Project Element.

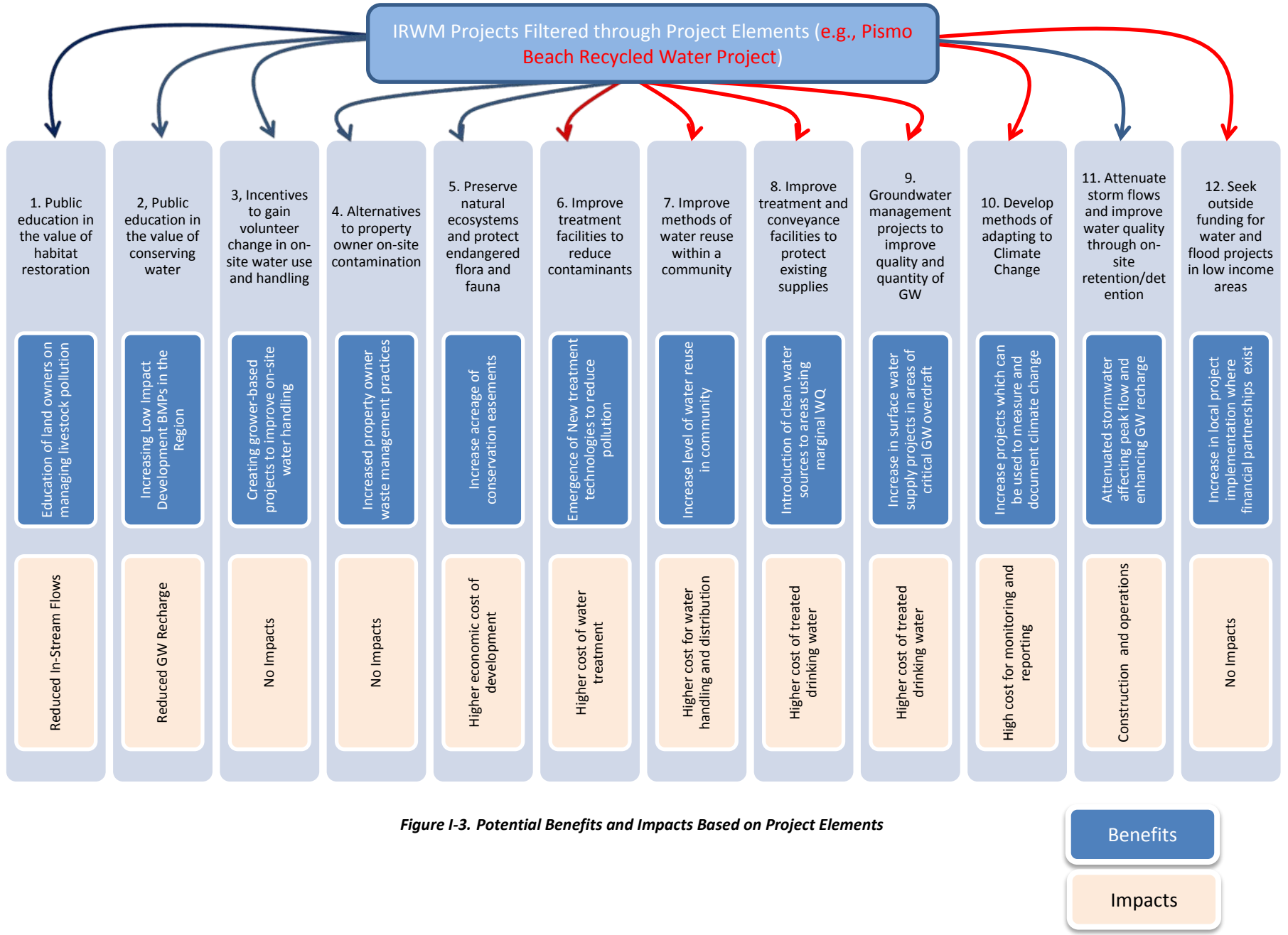


Figure I-3. Potential Benefits and Impacts Based on Project Elements

1. Provide public education in the value of habitat restoration and protection of water quality and quantity in natural streams and groundwater.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Implement a suite of educational best management practices to stem livestock pollution currently being introduced into native fresh water streams from rural land uses.	Local and regional benefits occur over rural residential areas. IRWM Projects include: • <i>MLTP_ECO1 - Livestock & Land Program</i>				
Implement a suite of homeowner best management practices targeting stormwater quality for the protection and restoration of downstream natural habitats.	Local benefits occur to existing and new residential developments. IRWM Projects include: • <i>MLTP_WMT2 - LID Pilot Program</i>				
Introduce education-based fertilizer optimization programs directed at growers to reduce degradation of downstream surface water quality and natural habitats.	Local benefits occur in agricultural areas where applied fertilization is occurring. IRWM Projects include: • <i>NCNT_ECO1 - North County Fertilizer Regions Precision Agriculture</i>				
Implementation of a <u>regional</u> education program through public media based on simple and effective best management practices for the benefit of natural habitat restoration, and protecting sensitive ecosystems.	Regional benefits occur over IRWM region and adjoining IRWM regions who may be touched through local media, etc. IRWM Projects include: • <i>NCNT_WMT1 - Community Based Social Marketing</i>				
Create new ecosystems (i.e. wetlands, sloughs, etc.) from existing barren lands achieving new habitat development with stormwater quality and groundwater recharge benefits without impacting water supplies.	Local to low lying and coastal areas where stormwater accumulation and ocean storm surge is heaviest and most prolonged. IRWM Projects include: • <i>NCST_FLD1 - Los Padres CCC Center - Stormwater LID Treatment Project</i>				
Impacts Summary					
Impacts from projects using education as the primary tool of anthropomorphic change to improve habitat restoration and protect water quality and quantity.	Possible impacts may include reduced in-stream flow through stormwater attenuation and groundwater recharge, and minor construction related impacts.				

2. Provide public education in the value of conserving water for purposes of achieving sustainable surface water and groundwater drinking water supplies

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Implementation of Low Impact Development best management practices in the installation and educational use of water conservation devices.	Local to existing and new residential developments. IRWM Projects include: • <i>MLTP_WMT2 - LID Pilot Program</i>				
Implementation of <u>regional</u> public education programs on simple and effective water conservation best management practices for improving drinking water supplies	Regional to IRWM region and adjoining IRWM regions who may be touched by such a program through local media, etc. IRWM Projects include: • <i>NCNT_WMT1 - Community Based Social Marketing</i>				
Optimization of educational on-farm irrigation practices to improve drinking quantity and quality of water supplies.	Local to agricultural areas where irrigation practices are degrading available water supplies. IRWM Projects include: • <i>NCNT_WMT2 - Precision Agricultural Best Management Practices</i>				
Impacts					
Impacts from projects using education as the primary tool of increasing water conservation for purposes of achieving a sustainable water supply.	Possible impacts may include reduced in-stream flow through improved irrigation practices, reduced groundwater recharge in areas of surface water application, higher economic cost of plumbing fixtures, and perhaps some minor construction related impacts.				

3. Provide public incentives to gain volunteer change in on-site water use and handling practices.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Implementation of individual property owner management of livestock waste through improved handling practices of on-site drainage and irrigation water.	Local to rural residential areas with livestock. IRWM Projects include: • <i>MLTP_ECO1 - Livestock & Land Program</i>				
Implementation of Low Impact Development best management practices to create incentives for improving on-site runoff and increasing natural groundwater recharge.	Local to existing and new residential developments. IRWM Projects include: • <i>MLTP_WMT2 - LID Pilot Program</i>				
Implementation of grower-based projects to improve on-site water handling practices to minimize fertilizer transport through irrigation and stormwater runoff.	Local to agricultural areas. IRWM Projects include: • <i>NCNT_ECO1 - North County Fertilizer Regions_ Precision Agriculture</i>				
Impacts					
Impacts from projects using volunteer change as the primary tool for improving sustainable water supplies.	No impacts.				

4. Provide cost-effective alternatives to private property owners in managing on-site sources of contamination.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Implementation of individual property owner management of livestock through improved waste handling practices.	Local to rural residential areas with livestock. IRWM Projects include: • <i>MLTP_ECO1 - Livestock & Land Program</i>				
Implementation of Low Impact Development best management practices to create incentives for improving on-site urban runoff from entering natural waterways.	Local to existing and new residential developments. IRWM Projects include: • <i>MLTP_WMT2 - LID Pilot Program</i>				
Implementation of grower-based projects to reduce off-site fertilizer transport or groundwater leaching.	Local to agricultural areas. IRWM Projects include: • <i>NCNT_ECO1 - North County Fertilizer Regions_ Precision Agriculture</i>				
Impacts					
Impacts from projects managing the sources of contamination to improve water quality	No impacts.				

5. Create and preserve natural ecosystems and protect endangered flora and fauna through Land Stewardship and Conservation Easement programs.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Purchase and/or acquire conservation easements over designated natural lands, protecting and preserving the native flora and fauna over these lands in perpetuity.	Applies to regional areas of undeveloped areas. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_ECO2 - Attiyeh Ranch Conservation Easement</i> 				
Implementation of Low Impact Development setting aside sensitive habitat areas within the development area.	Local to new residential developments. IRWM Projects include: <ul style="list-style-type: none"> • <i>MLTP_WMT2 - LID Pilot Program</i> 				
Create new ecosystems (i.e. wetlands, sloughs, etc.) from existing barren lands achieving new habitat for endangered flora and fauna preserving for future generations.	Local and Regional IRWM Projects include: <ul style="list-style-type: none"> • <i>NCST_FLD1- Los Padres CCC Center - Stormwater LID Treatment Project</i> 				
Impacts					
Impacts from projects which achieve long term protection of native lands and protection of flora and fauna.	Potential higher economic cost of development and long term maintenance, monitoring and reporting to ensure protection over time.				

6. Develop and improve water and wastewater treatment facilities to reduce point source discharges of contaminants to natural streams and comply with Waste Discharge permits.⁴

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Implement new treatment technologies to reduce point-source discharges of pollution to natural streams and rivers from existing wastewater treatment plants.	Existing wastewater treatment plants discharging to freshwater streams and rivers. IRWM Projects include: • <i>NCNT_GWM1 - Upper Salinas River Basin Water Conservation/Conjunctive Use Project</i>				
Construct recycled water systems to improve existing water quality in streams impacted by nuisance flows in urban runoff.	Urbanized areas with adequate wastewater flows for recycled water treatment and use. IRWM Projects include: • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i>				
Impacts					
Impacts from projects which improve existing water supply, recycled water, and wastewater treatment plants and their respective waste streams for the protection of downstream rivers and freshwater streams.	Potential higher economic cost of treatment plant construction, and annual energy and operations costs.				

⁴This is typically a secondary benefit of recycled water programs where supplies in excess of demand are discharged to natural streams for improved dilution of urban runoff. All such programs fall under the NPDES Phase II Storm Water Management Program.

7. Develop and Improve methods of water reuse within a community.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Construct recycled water systems to improve the level of water reuse in a community (i.e. consideration of recycled water use to front yard landscaping).	New and existing residential developments where sufficient wastewater streams are generated. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_GWM1 - Upper Salinas River Basin Water Conservation/ Conjunctive Use Project</i> • <i>SCNT_WSP2 - Recycle Water Distribution System Expansion</i> • <i>MLTP_WMT2 - LID Pilot Program</i> 				
Implement water handling practices along the wet coastal areas for better management of irrigating community parks and local ecosystems with local runoff and high dew point events, or fog.	Local to coastal regions with higher rainfall amounts, and a high frequency of summer fog events. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCST_FLD1- Los Padres CCC Center - Stormwater LID Treatment Project</i> 				
Seek regional recycled water solutions, where cost effective.	Regional to higher density areas with parks and public lands suitable for recycled water use. IRWM Projects include: <ul style="list-style-type: none"> • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i> 				
Impacts					
Impacts from projects which increase the reuse of water, whether from recycling water or capturing stormwater and applying to a higher purpose (i.e., matching quality to use)	Potential higher economic cost of treatment plant construction, water handling and distribution appurtenances and annual energy and operations costs.				

8. Develop new treatment and conveyance facilities to increase and protect the availability of existing water supplies.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Construct innovative treatment and strategic conveyance facilities to benefit existing water supplies.	Local to existing and new development areas where innovative solutions can be identified as the most cost-effective alternatives. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_GWM1 - Upper Salinas River Basin Water Conservation/ Conjunctive Use Project</i> 				
Implement programs targeted at bringing clean water to sources currently using water supply wells or poor quality surface water diversions.	Local to communities with public water systems which are surface water, groundwater, or both. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_WSP1- City of Paso Robles Lake Nacimiento Water Treatment Plant Construction Use Project</i> • <i>NCNT_WSP2 - San Miguel Critical Water System Improvements</i> • <i>SCNT_WMT1 - Lopez Water Treatment Plant Membrane Rack Addition</i> 				
Construct new water facilities to (directly or indirectly) protect existing groundwater supplies from salinity intrusion and/or nitrates introduced by septic systems.	Regional to higher density areas where salinity concentrations are high or where septic systems are still in use and shallow groundwater wells (or imported supplies) serve as a primary drinking water supply. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCST_GWM1 - 8th Street Upper Aquifer Well and Nitrate Removal Facility</i> • <i>SCNT_WSP2 - Recycle Water Distribution System Expansion</i> • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i> 				
Impacts					
Impacts from projects which construct treatment and conveyance systems for the benefit and protection of existing water supplies.	Potential higher economic cost of treatment plant construction, water handling and distribution appurtenances and annual energy and operations costs.				

9. Develop new groundwater management projects to improve the quality and quantity of groundwater in accordance with a regional stakeholder-based groundwater basin plan.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Construct alternative water supply projects in areas of critical groundwater overdraft.	Local to areas where groundwater basins are at or below a sustainable or safe yield. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_WSP1 - City of Paso Robles Lake Nacimiento Water Treatment</i> 				
Construct treatment projects (i.e., recycled, direct injection, well head treatment, surface water, etc.) to increase water quality from existing sources of supply to benefit groundwater resources.	Local to areas of groundwater contamination either from nitrates or salinity. IRWM Projects include: <ul style="list-style-type: none"> • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i> • <i>SCNT_WMT1 - Lopez Water Treatment Plant Membrane Rack Addition</i> 				
Increase capacity, or implement new technologies, of water treatment systems to increase the capacity of existing alternative water supply projects.	Local to regional surface water supply facilities. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCST_GWM1 - 8th Street Upper Aquifer Well and Nitrate Removal Facility</i> 				
Impacts					
Impacts from projects which improve the quality or increase the capacity of existing sources of supply to the benefit of groundwater resources.	Potential higher economic cost of treatment plant construction, water handling and distribution appurtenances and annual energy and operations costs.				

10. Develop methods of adapting to Climate Change and other vulnerabilities to the region's water resources.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefits					
Construct projects which provide a collection of possible adaptation strategies which can be measured in relation to documented climate change.	Local to coastal areas where climate change sensitivity is thought to be the highest. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCST_FLD1- Los Padres CCC Center - Stormwater LID Treatment Project</i> 				
Incorporate climate change elements into water supply projects to assist in the identification and implementation of adaptation measures over time.	Local to areas with new water supply infrastructure and a watershed plan which includes climate change adaptation. IRWM Projects include: <ul style="list-style-type: none"> • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i> 				
Impacts					
Impacts from projects which assist in the clear scientific documentation of climate change adaptation strategies for all water use sectors.	Potential monitoring and reporting costs.				

11. Attenuate storm flows and improve stormwater quality by increasing on-site retention and detention controls.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Construct projects which collect stormwater for purposes of flood attenuation affecting peak flow events and groundwater recharge.	Local to areas where significant drainage can be captured. IRWM Projects include: <ul style="list-style-type: none"> • <i>SCNT_FLD2 - Oceano Drainage Improvement Project - Hwy 1 & 13th Street</i> 				
Incorporate flood management elements into Low Impact Development strategies.	Local to areas with new drainage and flood control infrastructure. IRWM Projects include: <ul style="list-style-type: none"> • <i>MLTP_WMT2 - LID Pilot Program</i> 				
Impacts					
Impacts from projects which assist in flood management through on-site retention and detention controls.	Environmental impacts associated with the construction, and operation and maintenance of a detention/retention basin.				

12. Seek outside funding for water and flood control projects in low income areas.

Project Types	Implementation Areas/IRWM Projects	Most Applicable Sub-Region(s)			
		North Coast	South Coast	North County	Adjacent Regions
Benefit Activities					
Assist in implementation of projects which benefit low income areas and have secured outside funding sources.	Local to low income communities. IRWM Projects include: <ul style="list-style-type: none"> • <i>NCNT_WSP2 - San Miguel Critical Water System Improvements</i> • <i>SCNT_FLD2 - Oceano Drainage Improvement Project - Hwy 1 & 13th Street</i> 				
Assist in financing of low income community projects where financial partnerships between adjoining communities have already been formed and actions already taken.	Local to areas where regional benefits occur through project implementation, with special attention to low income areas. IRWM Projects include: <ul style="list-style-type: none"> • <i>SCNT_WSP4 - Pismo Beach Recycled Water Project</i> 				
Impacts					
All actions which assist in the support and financing of projects benefiting low income areas.	No impacts.				

I.3 BENEFITS AND IMPACTS TO OTHER RESOURCES

Other resources affected by the IRWM Plan, other than water resources and ecosystem management are included in **Table I-6** to provide the full spectrum of analysis which takes place at the project implementation stage, largely via the CEQA/NEPA process, or in accordance with IRWM standards if pursuing IRWM funding. The following are the areas anticipated to be evaluated for impacts and benefits when projects proceed to the implementation stage.

Table I-6. Other Resource Impacts and Benefits

Resource	Impacts	Benefits
Aesthetics Resources There is an interest in maintaining scenic open vistas, the “small town” feel, and neighborhood qualities.	To the degree that new facilities are required, they can be evaluated at a project level to address community concerns about aesthetic resource effects. In coastal areas, any new facilities, such as desalination plants or wastewater treatment plants, including recycled water, would also require review and permitting by the California Coastal Commission.	Implementation of the IRWM Plan will seek preservation of open space, community separators, and the open scenic vistas currently enjoyed by the region’s residents.

Table I-6. Other Resource Impacts and Benefits, Continued

Resource	Impacts	Benefits
<p>Agricultural Resources Includes the protection and enhancement of agricultural activities in the region.</p>	<p>Changes in crop types and, more probably, changes in water use efficiency measures, may be required to maintain the same level of agricultural production. While it is not possible to state which agricultural areas may need to review water use practices, it can be stated that a growing population together with growing environmental water demands may create changes in agricultural water use.</p>	<p>The implementation of the IRWM Plan should create a high level of certainty with regards to water supplies and agricultural land use that will provide land managers with a strong foundation on which to base an agricultural investment strategy, thereby strengthening agriculture in the region.</p>
<p>Air Quality Standards Normally, San Luis Obispo County meets all federal air quality standards; however, during certain days state standards for ozone and fine particulates are not met.</p>	<p>Ozone generation is closely related to population and growth issues. The San Luis Obispo County Clean Air Plan and City and County general plans work together to facilitate “smart growth” principles that strive to limit the necessity for vehicle trips. Key strategies may involve compact urban development and limitations on urban sprawl.</p>	<p>Implementation provides support to existing policies in City and County General Plans, the Clean Air Plan, and various other planning, land use, and resource documents. Because water is such a key component in growth and growth pattern issues, providing water resources in a manner consistent with existing Clean Air and growth management policies regarding those same issues can be viewed as bolstering both efforts.</p>
<p>Biological Resources San Luis Obispo County is extremely diverse in biological resources including, but not limited to, natural ecosystems, estuaries, fisheries, wetlands, and flora and fauna.</p>	<p>Implementation of the IRWM Plan is not expected to result in substantial negative impacts to biological resources within the region. To the degree that new facilities are required, they can be evaluated at a project level to address community and agency concerns about biological resource effects.</p>	<p>IRWM policies designed to protect and enhance agricultural areas, wildlife habitat, environmental water needs, and to protect watersheds may be needed to further benefit biological resources.</p>
<p>Cultural Resources Local communities and Native American Tribal groups are strongly interested in protecting prehistoric sites, while historical societies and related groups are involved with protecting and enhancing historic resources.</p>	<p>Project-level analysis and design will limit biological impacts accompanied by adequate mitigation efforts, if needed.</p>	<p>Implementation in a manner consistent with current General Plan policies focuses growth in or adjacent to existing urban areas. The outcomes may include preservation of open space, community separators, and the pre-historic and historic resources currently existing in these areas.</p>

Table I-6. Other Resource Impacts and Benefits, Continued

Resource	Impacts	Benefits
<p>Environmental Justice Environmental Justice (EJ) is the fair treatment of all people regardless of race, color, nation of origin, or income and meaningful involvement of people within communities.</p>	<p>The potential adverse impacts related to EJ include minorities or low-income areas who may be excluded from the environmental and land use policy setting resulting in a disproportionate impact from one or more environmental hazards.</p>	<p>Plan Implementation includes EJ by providing reliable and sustainable water supplies and flood control. All IRWM projects consider EJ in their planning, outreach, construction, and operations.</p>
<p>Natural Hazards/ Hazardous Materials The San Luis Obispo County region is seismically active, containing both portions of the San Andreas Fault system as well as numerous other active faults. Coastal portions of the County are subject to tsunami hazards, while numerous areas present unstable soils and landslide concerns. Further, the presence of substantial areas of ultra-mafic rock gives rise to concerns about naturally-occurring asbestos, mercury and nickel ore, and other heavy metals.</p>	<p>Consideration of natural hazards occurs with all IRWM projects. As a part of planning and execution, consideration takes place of construction activities and associated environmental hazards, including, but not limited to, the risk of spills of petroleum products and mobilizing airborne contaminants.</p>	<p>Projects adjacent to existing urban areas consider and facilitate avoidance of natural hazard impacts (such as flood zones and high fire hazard areas) and/or manmade impacts (such as rerouting construction or chemical transport vehicles through less populated areas).</p>
<p>Population/Housing San Luis Obispo County region ranks as one of the least affordable in the nation, with the typical home priced well above the income range of the average resident.</p>	<p>While it cannot be said that the costs of providing water-related services (water supply, wastewater disposal, and flood control) are major contributors to housing costs in the region, these elements could exacerbate the situation if not planned for appropriately.</p>	<p>Project implementation considers reducing the region’s water related costs, primarily by reducing infrastructure and treatment costs through economies of regionalization and integration of projects/programs.</p>
<p>Public Services/Utilities The San Luis Obispo region has a significant number of water supply, drainage, and sanitary sewage facilities, each with separate master plans.</p>	<p>The IRWM Plan considers the regional master plans for providing water, disposing of wastewater, and dealing with flood hazards in a manner that is consistent with long-term community sustainability.</p>	<p>Project implementation provides integration with public services serving as a portion of the blueprint from which planning of the provision of vital public services occurs. The IRWM Plan, together with City and County smart growth policies built in the General Plans, provides these services in the most efficient manner possible.</p>

Table I-6. Other Resource Impacts and Benefits, Continued

Resource	Impacts	Benefits
<p>Transportation/Circulation Transportation plans are influenced depending on the location and level of water resources management to sustain growth (existing and new), and increased tourism.</p>	<p>To the extent new growth and/or increased tourism occurs as a result of improved water resources, additional strain to existing transportation systems may take place.</p>	<p>Implementation of the IRWM Plan supports existing policies in City and County General Plans, transportation and circulation plans, and various other planning, land use, and resource documents. Because water is such a key component in growth, providing water resources in a manner consistent with existing growth management policies regarding those same issues will bolster both efforts.</p>

