Section H
IMPACTS AND BENEFITS

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Section H

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H. IMPACTS AND BENEFITS

Section H Summary *– Proposed IRWM water management strategies and the collective Tier I projects will result in a Region-wide benefits that include water quality improvement, ecosystem improvement, fish and wildlife enhancement, flood control enhancement, erosion control enhancement, recreation and public access enhancement, public safety enhancement, enhancement of water supply reliability, cultural resource preservation, reduced wastewater discharges, improved water management coordination, enhanced scientific and public understanding, and economic benefits. Potential negative impacts associated with Tier I are primarily limited to short-term construction-related effects. Inter-regional benefits include (1) reduced capacity needs for statewide and Metropolitan imported water facilities and (2) environmental benefits associated with reduced needs for Bay-Delta and Colorado River waters.*

H.1 Regional Benefits

The proposed Tier I IRWM projects will help achieve the designated IRWM Plan goals of:

1. developing reliable water supplies,
2. protecting and enhancing water quality,
3. providing stewardship of our natural resources, and
4. increasing coordination and integration of water management planning.

As documented in Section F, the Tier I projects collectively implement each of the nine Plan objectives. In implementing these goals and objectives, the Tier I projects will result in many long-term regional benefits. Table H-1 (page H-2) summarizes these regional benefits by water management strategy. Appendix 11 summarizes the benefits associated with individual Tier I projects.

Table H-1
Summary of Regional Benefits by Water Management Strategy

	Water Management Strategy	Regional Benefit															
		Water Quality Improvement	Ecosystem Improvement	Enhance Fish and Wildlife	Enhance Flood Control	Enhance Erosion Control	Enhance Public Safety	Enhance Recreation	Enhance Public Access	Water Supply Reliability	Improve Quality of Water Supply	Reduce Wastewater Discharges	Preserve Cultural Resources	Improve Water Mgt. Coordination	Enhance Scientific & Tech. Knowledge	Public Education & Awareness	Funding and Economic Benefits
2	Agricultural Land Stewardship	●	●	●		●					●		●				●
3	Agricultural Water Use Efficiency	●	●	●						●		●		●	●	●	●
4	Groundwater Management	●					●			●	●			●	●		●
	Conjunctive Use						●			●	●			●	●		●
5	Conveyance						●			●	●			●			●
6	Seawater Desalination						●			●	●			●			
7	Potable Water Treatment and Distribution						●			●	●			●			●
8	Economic Incentives	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
9	Ecosystem restoration	●	●	●	●	●		●	●		●	●		●	●	●	●
	Ecosystem preservation	●	●	●	●	●		●	●		●	●		●	●	●	●
	Env. and habitat protection and improvement	●	●	●	●	●		●	●		●	●		●	●	●	●
	Wetlands enhancement and creation	●	●	●	●	●		●	●		●	●		●	●	●	●
10	Floodplain Management		●		●	●	●	●	●					●	●		●
11	Groundwater Aquifer Remediation	●	●				●			●	●			●	●		●
12	Matching Quality to Use	●												●			●
13	Pollution Prevention	●	●	●			●	●			●	●		●	●	●	●
	Water quality protection and improvement	●	●	●			●	●			●	●		●	●	●	●
	Wastewater treatment\	●	●	●			●	●			●	●		●	●	●	●
15	Recharge Area Protection		●	●	●				●	●	●		●	●			●
16	Recycled Water									●		●		●			●
18	Regional Surface Storage	●		●	●		●	●	●	●	●			●	●		●
19	Reoperation and Reservoir Management	●		●	●		●	●	●	●	●			●	●		●
20	Urban Land Use Management	●	●	●	●	●	●	●				●	●	●		●	●
21	Urban Runoff Management	●	●	●		●	●	●				●		●	●	●	●
22	Urban Water Use Efficiency	●	●	●						●		●		●	●	●	●
23	Water Transfers									●	●			●			●
24	Water-Dependent Rec. and Public Access	●					●	●	●					●		●	●
25	Watershed Management and Planning	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Proposed IRWM water management projects will result in:

- water quality improvement,
- ecosystem improvement,
- fish and wildlife enhancement,
- flood control enhancement,
- erosion control enhancement,
- public safety enhancement,
- recreation and public access enhancement,
- enhanced of water supply reliability,
- reduced wastewater discharges,
- improved water management coordination,
- enhanced scientific knowledge and public understanding/awareness, and
- funding and economic benefits.

Water Quality Improvement. Protecting and enhancing water quality is one of the goals of this Plan. Tier I projects that incorporate water quality enhancement/pollution management strategies will provide direct improvement in water quality. Habitat preservation and land conservation projects will also provide water quality benefits.

Ecosystem Improvement. As documented in Section B, development is reducing the number of large tracts of open space remaining within the Region. With a decrease in the total acreage of available habitat, the range and mobility of species has been adversely affected. Ecosystem impacts also result from impaired water quality and from invasive species. Proposed Tier I projects would enhance the Region's ecosystems and protect endangered and threatened species, and would include:

- land conservation and preservation projects that would sustain existing habitats and provide important wildlife linkages and corridors,
- water quality protection projects that result in surface water quality improvement and improved compliance with water quality standards,
- debris cleanup and habitat restoration,
- creation of wetlands, buffers, or other habitat, and
- invasive species removal and control.

Fish and Wildlife Enhancement. The Tier I projects will result in benefits to fish and wildlife through project components that:

- improve water quality and compliance with water quality standards,
- create additional wetlands and other habitats,

- conserve or preserve existing habitats and undeveloped lands, and
- remove and control invasive species.

Additional benefits to fish and wildlife would occur through projects that result in reduced erosion and reduced wastewater discharges.

Land preservation/conservation, in particular, is a focus of many of the Tier I projects. Because of continued development, the total acreage of available habitat within the Region has decreased, and the range and mobility of species has been adversely affected. Proposed land conservation projects will preserve existing habitats and provide for important wildlife corridor linkages. Since development of these lands could result in increased urban runoff and degraded water quality, the land conservation projects will also provide regional water quality benefits.

Flood Control Enhancement. As documented in Sections B and C, many stream channels within the Region are adversely impacted by invasive species. In addition to adversely impacting native habitat, such invasive species may choke stream channels and impede surface flow. Removing invasive species would improve the efficiency of streams and flood control channels to route flood flows downstream. Additional flood control enhancement may be provided by Tier I project components that involve:

- stormwater collection, diversion, or capture,
- porous pavement replacement projects implemented as part of proposed water quality improvements projects,
- land conservation projects (which prevents development with its associated higher runoff potential) from occurring in conserved portions of the Region's watersheds, and
- irrigation runoff reduction projects or weather-based irrigation projects implemented as part proposed water conservation projects. (Storm runoff coefficients are highest when soils are saturated. Irrigation efficiency and runoff reduction projects would result in reduced soil water at the ground surface, allowing a greater percentage of precipitation to infiltrate into the ground.)

Enhanced Erosion Control. Increasing development within the Region has resulted in the potential for increased storm runoff, increased flow velocities, and increased erosion. Additionally, invasive species choke stream channels and impede surface flow, resulting in increased severity of flooding and a corresponding increase in erosion as a result of the

increased water levels. Erosion control would be enhanced by implementing Tier I projects that:

- remove and control invasive species that choke floodways,
- preserve existing undeveloped lands,
- decrease the potential for flood flows that overtop levees or flood berms, and
- incorporate storm runoff containment practices or facilities that reduce runoff velocities (thus reducing scour).

Enhanced Public Safety. Public safety and property protection will be enhanced by Tier I projects that improve flood protection. Public safety will also be enhanced as part of water quality protection projects that:

- reduce bacteria pollution,
- decrease the potential for recreational-related public safety impacts, and
- improve compliance with Basin Plan bacteriological requirements.

Implementing proposed Tier I water supply projects would also enhance public safety. Water supply projects that address source water control and protection will increase the integrity, quality, and safety of potable water supplies. Additionally, fire-fighting and public sanitation will be improved through:

- water supply projects that improve the reliability and flexibility of the Region's water supply infrastructure (including treatment, conveyance, and storage facilities) to reliably deliver water, and
- water supply projects that increase supply reliability through source diversity and use of local water sources.

Enhanced Recreation and Public Access. While numerous recreational opportunities exist in the Region, increased population growth has resulted in a corresponding increase in the use of the available recreational resources. In addition to an increase in demand for recreational opportunities, a demand exists for linking existing parks and recreational areas along the Region's watercourses. Invasive species also represent a current impact to recreation. By displacing native habitat, limiting access, and limiting sight lines, invasive species have decreased the overall recreational experience for hikers, nature lovers, and bird-watchers within many watersheds. Recreation and public access would be enhanced by IRWM projects that:

- provide for direct improvement in public access or recreation,
- remove and control invasive species,
- increase (through land preservation or conservation) lands available for recreation, and
- provide for links between existing land preserves and recreational lands.

Water Supply Reliability. The reliability of the Region's water supply system will be enhanced by projects that (1) provide for greater water supply diversity and greater local water supply, and (2) increase the flexibility, capacity, and redundancy of the Region's water supply infrastructure.

As shown in Appendices 5 and 10, many Tier I projects address water system reliability and water source diversity. Tier I projects that improve water supply diversity and increase the contribution of local sources within the Region's water supply portfolio include:

- water conservation projects,
- projects that support desalination,
- projects that support water transfers,
- groundwater projects including brackish groundwater desalination,
- recycled and other non-potable water projects, and
- water quality protection projects that improve the usability and treatability of existing water supplies.

Tier I projects that provide for increased system reliability through improvements in infrastructure flexibility, capacity, and redundancy include projects that:

- increase or upgrade potable water treatment capacity within the Region,
- increase the geographic diversity of water treatment capacity within the Region,
- increase local storage capacities and provide for greater geographical diversity in the Region's water storage facilities,
- increase the capacity of existing facilities to convey water between existing storage reservoirs or from storage reservoirs to water treatment plants,
- provide new conveyance links between existing storage and treatment facilities to facilitate efficient water storage and management,

- upgrade conveyance and storage facilities to decrease the potential for system failure, and
- increase the capacity of conveyance and storage facilities to improve operations flexibility and reliability.

Preservation of Cultural Resources. Many cultural resources sites have been identified within the Region that are preserved on government, tribal, or foundation owned land preserves. On private lands, however, these resources may be disturbed or removed as lands are developed (after appropriate surveying and collection of resources in accordance with environmental regulations). Proposed Tier I land conservation projects would enhance preservation of such cultural resource sites.

Decrease Wastewater Discharges. Implementation of proposed Tier I pollution prevention and stormwater management projects would reduce the volume of urban runoff discharged to surface waters. Tier I water conservation projects and recycled water projects would also reduce the quantity of municipal wastewater discharged to the Region's ocean outfalls.

Water Management Coordination. The IRWM process will allow for increased water management coordination among agencies in evaluating and selecting priority projects from the Tier I list. Several of the Tier I projects will directly support increased water management coordination through:

- projects that document and evaluate regional data management and coordination needs,
- source identification studies that identify specific water quality problems that may require inter-agency or regional resolution, and
- feasibility studies that identify and assess future water management options.

Increased Scientific Knowledge. As addressed by short-term priority #5 of this Plan, additional work is required to thoroughly review the technical and scientific basis for specific use designations and standards established under the Basin Plan. Because of the complexity and scope of this undertaking, a necessary first step is to complete a thorough needs assessment that establishes priorities and recommended actions for addressing identified deficiencies. This Plan develops action plans to address scientific/technical needs (see Table G-8 on page G-22) and to address data management (see Table G-7 on page G-20).

Increased Public Education and Environmental Awareness. Many Tier I water conservation and water quality protection projects include public education/environmental awareness components. Such programs are directed toward encouraging public support and awareness to:

- promote and increase water conservation,
- discourage illegal dumping of trash and litter in watercourses, and
- encourage appropriate water management practices, including appropriate collection and disposal of hazardous liquid wastes.

These projects will help complement the Public Outreach Plan (Appendix 8) proposed to achieve short-term priority #3.

Economic Benefits. Implementing the Tier I water management projects will result in economic benefits to the Region, including:

- avoiding potentially economically significant impacts to the regional economy (business, industry, and agriculture) associated with water supply interruption,
- tourism economic benefits associated with water quality improvement and enhanced recreational opportunities,
- economic benefits associated with enhanced public safety and flood protection, erosion and sediment control, and
- benefits to the regional economy and labor associated with constructing and maintaining proposed IRWM facilities.

Another direct economic benefit of the IRWM Plan is that the planning process allows for implementing agencies and organizations to maximize existing resources by (1) eliminating duplication or overlap among regional projects, (2) pooling resources to resolve common environmental or regulatory challenges, and (3) coordinating the development of regional data management systems that can be used to improve project evaluation and effectiveness. Additionally, the IRWM Plan process allows regional agencies to more effectively secure outside funding (such as funding through State of California Proposition 50 and Proposition 84 grant programs).

H.2 Regional Impacts

Negative impacts that may be associated with the proposed IRWM projects include (1) short-term, site-specific impacts related to site grading and construction, and (2) long-term impacts associated with project operation.

Construction-related impacts associated with implementing physical facilities may include traffic, noise, biological resources, water quality, public services and utilities, cultural resources, and aesthetics.

Table H-2 (page H-10) summarizes potential impacts associated with the implementation of key project elements within the Tier I projects. As shown in Table H-2, operation of proposed IRWM projects may result in several impacts, including:

- effects of groundwater supply projects on groundwater-dependent vegetation,
- the treatability and quality of water from new supply sources,
- effects of recreation on raw water supplies within surface water reservoirs,
- surface conveyance and surface storage operations and associated impacts on riparian habitat,
- effects of flood control projects on erosion, sedimentation, and water quality,
- ground and surface water quality effects associated with recycled water use,
- waste discharge issues associated with brine management and brine disposal, and
- increased wastewater residuals (biosolids) generation associated with upgraded water, recycled water and wastewater treatment.

Appendix 11 summarizes the general categories of negative impacts associated with specific Tier I projects.

Project-specific and/or programmatic environmental compliance processes (CEQA, and if applicable NEPA) will evaluate the significance of the impacts. Impacts concluded as being significant must be mitigated to a level of non-significance (unless the lead agency makes findings of overriding consideration).

Table H-2
Summary of Potential Long-Term Regional Impacts for Key Components of Tier I Projects

Type of Tier I Project	Project Component	Potential Long-Term (Non-Construction) Impact[1]
Urban Runoff Management	Discharge to Groundwater	• Groundwater quality
	Diversion to Sewer	• Sanitary sewer collection and treatment facilities
Ecosystem Restoration and Protection	Land Conservation	• NA
	Invasive Species Removal	• Habitat and endangered species • Sedimentation and erosion
	Revegetation	• Habitat and endangered species • Sediment and erosion
Flood Management	Storm Drains or Channels	• Habitat and endangered species • Sediment and erosion
Water-Based Recreation	Reservoir Recreation	• Reservoir water quality and potable water treatment
	Parks, Access and Trails	• Habitat and endangered species
Potable Water Supply	Underground Conveyance Facilities	• Land (rights-of-way)
	Surface Conveyance	• Habitat and endangered species • Sediment and erosion
	Storage Facilities or Storage Operations	• Habitat and endangered species • Recreation
	Treatment Facilities	• Energy (power consumption) • Aesthetics, noise and traffic
	Desalination	• Energy (power consumption) • Receiving water quality (brine disposal) • Entrainment and impingement of marine organisms • Aesthetics, noise and traffic
Groundwater	Groundwater Supply Development	• Groundwater-dependent vegetation • Groundwater availability (adjacent groundwater users)
	Conjunctive Use	• Groundwater-dependent vegetation • Groundwater availability (adjacent groundwater users) • Groundwater quality
	Brackish Groundwater Demineralization	• Groundwater dependent vegetation • Aesthetics, noise and traffic • Receiving water quality (brine disposal)
Recycled Water	Conveyance & Reuse	• Land (rights-of-way) • Groundwater quality • Surface runoff and surface water quality
	Treatment	• Energy • Aesthetics, noise and traffic
	Brine Disposal	• Receiving water quality

1 Project-specific and/or programmatic environmental compliance processes (CEQA, and if applicable NEPA) will evaluate the significance of the impacts. Impacts concluded as being significant must be mitigation to a level of non-significance (unless the lead agency makes findings of overriding considerations).

H.3 Inter-Regional Benefits and Impacts

Tier I projects proposed as part of this IRWM Plan help implement recommendations presented in the *Updated 2005 Urban Water Management Plan.* Implementation of proposed Tier I water conservation, groundwater, water transfer, desalination, and recycled water projects within the Region are projected to result in a decreased demand for State Water Project and Colorado River supplies within the next 20 years. (As shown in Tables B-30 and B-31 on pages B-72 and B-73, this overall decline in imported water needs is forecast both for normal year and for drought conditions.)

Reduced dependency of the Region on imported water supplies will, in turn, reduce needs for Bay-Delta waters delivered through the State Water Project. This reduction in imported water need, in concert with other statewide programs, will help implement the following two objectives established as part of the CALFED Bay Delta Program for Bay-Delta waters:

- Improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. (CALFED, 2000)
- Reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system. (CALFED, 2000)

Reducing the Region's dependence on imported water will also result in inter-regional benefits associated with reductions in capacity and flows within the State Water Project, Colorado River Aqueduct, and Metropolitan conveyance, treatment, and storage facilities. Populations within Riverside County, in particular, will benefit from reductions in the Region's capacity needs at Metropolitan's Lake Skinner Water Filtration Plant. Such a reduction in treated water needs (both as a result of reduced imported water demands and as a result of increased local water treatment capacity) will free treatment capacity within the Lake Skinner facility that will be required to serve significant growth increases within Riverside County.

H.4 Objectives Requiring Regional Solution

Regional solutions will be required to achieve all nine Plan objectives. To foster such regional solutions, the Plan's overarching Objectives A, B, and C are the focus of the short-term action plans to promote stakeholder involvement, regional data management collection and dissemination, and scientific/technical understanding.

Objective A - Stakeholder Involvement. Regional solutions (see Section N) are required for maximizing stakeholder/community involvement and stewardship. Short-term priority #3 addresses the need for a regional solution to increasing stakeholder/community involvement and stewardship. The proposed Public Outreach Plan (see Appendix 8) incorporates Region-wide stakeholder outreach/public involvement, disadvantaged community participation, and environmental justice elements that address Objective A. Stakeholder involvement must also integrate watershed-based planning groups and stakeholders. Proposed actions associated with short-term priority #6 (update assessment of local water management plans) will involve engaging stakeholders within the Region's watersheds and resource management community.

Objective B – Data Management. A regional approach will be required to achieve Objective B (effectively obtain, manage, and assess water resources data and information). As described in Section J, this objective would be achieved through the development of a regional data management system. As a first step toward Objective B, short-term priority #4 addresses the need to establish a web-based data management system for sharing, disseminating, and supporting the analysis of water management data and information. An action plan (Table G-7 on page G-20) is proposed to achieve this short-term priority.

Objective C - Scientific and Technical Understanding. A regional approach will also be required to achieve Objective C (further the technical and scientific foundation for water resources management). Achieving this objective will require coordination among regulators, data managers, project proponents, and the long-term IRWM institutional structure. Developing and maintaining a regional data management system (see Section J) will be important to furthering the technical foundation of Regional water management. Watershed-based solutions may also be appropriate in circumstances (such as TMDLs) where watershed-specific technical issues exist.

Short-term priority #5 involves completing a needs assessment and developing recommendations for addressing existing deficiencies in the technical and scientific foundation of Basin Plan beneficial uses and water quality objectives. An action plan (Table G-8 on page G-22) is proposed for addressing this short-term priority.

Objective D - Water Supply Diversity. Regional solutions are required to achieve Objective D (develop and maintain diverse mix of water resources). Such regional coordination is required to insure the diverse mix of water supplies specified within the Water Authority's *2005 Urban Water Management Plan*. Integrating local agency water supply development plans on a regional level is a key component of both the *2005 Urban Water Management Plan* and this IRWM Plan.

Objective E - Water Infrastructure Reliability. Regional solutions are also required to achieve Objective E (construct and maintain a reliable water infrastructure system). As presented herein, a diverse array of improvements in the Region's storage, treatment, and conveyance facilities are required to optimize system efficiency and flexibility, and to improve reliability through system redundancy. Individual system components (storage, treatment, and conveyance) must be integrated on a regional basis to achieve this objective and to assure that adequate treatment, storage, and conveyance reliability is achieved in all geographic areas of the Region.

Objective F - Hydromodification and Flood Control. Achieving Objective F (reduce the negative effects on waterways and watershed health caused by hydromodification and flooding) will require both watershed-based and regional solutions. Developing a better understanding of the causes and effects of hydromodification problems is best addressed by the combined resources of regional agencies. (NPDES stormwater copermittees have already taken a step in this direction.) Respective watershed issues and conditions must be addressed as part of implementing specific solutions to hydromodification.

Objective G - Pollution Reduction and Control. Both regional and watershed-based solutions are required to achieve Objective G (effectively manage sources of pollutants and environmental stressors). As documented herein, almost all of the Region's watersheds exhibit common beneficial uses. Common water quality problems (e.g. bacteria, sediment) exist within many of the watersheds, while other watershed-specific water quality problems occur in other watersheds.

Objective H - Habitat and Open Space. Regional and watershed-specific solutions are also required to achieve Objective H (protect, restore, and maintain habitat and open space). Regional solutions are required to implement effective habitat protection and conservation programs, wetlands creation and aquatic habitat protection/creation, and to ensure adequate and appropriate wildlife corridors and linkages between existing habitats.

Objective I – Optimize Water-Based Recreation. Both regional and watershed-specific solutions will be required to optimize water-based recreational opportunities (Objective I). Regional recreational needs as a whole must be considered in planning and assessing recreational facilities, as well as how the range of recreational opportunities within the Region may be integrated. Several key recreation-based opportunities within the Region involve the development of land preserves and recreational areas that extend along major rivers and streams (river parks). Both regional and watershed-based solutions are appropriate and required for assessing and implementing the Region's proposed river parks.

H.5 Disadvantaged Community Benefits and Impacts

Disadvantaged communities are geographically distributed throughout the Region. Thirty-nine of the Tier 1 projects have been identified as providing benefits to these disadvantaged communities. Project types include planning, implementation of capital project or restoration projects, education, and acquisition. Some projects offer more than one type of project benefit. An example is the San Diego Regional Water Quality Assessment and Outreach Project that will engage disadvantaged communities in citizen monitoring of surface waters. This has the added benefit of providing education and outreach. Several regional projects benefit disadvantaged communities by offering economic incentives and hardware upgrades to aid in water conservation. Table H-3 (page H-15) presents Tier 1 projects that provide benefits to disadvantaged communities, as identified by the project proponents.

Negative impacts to disadvantaged communities have not been identified for any of the Tier I projects. Other impacts may be identified through additional review of projects selected for funding, and as they progress through the public review process. Impacts to disadvantaged communities will be kept to a minimum. Any impact incurred from capital improvement projects will be temporary in nature. Additionally, the Public Outreach Plan seeks to engage disadvantaged communities to further involve them in the planning process.

In addition to the projects shown in Table H-3, other Tier I projects may provide indirect benefits to disadvantaged communities. The regional nature of the Region's water supply system insures equitable water supply safety, representation, and economic benefits among all water users, regardless of ethnicity or economics.

A disadvantaged community action plan (see Table G-6 on page G-19) is proposed as part a proposed Public Outreach Plan (see Appendix 8). Identifying and addressing environmental justice concerns (see Table G-5 on page G-19) are also addressed in the Public Outreach Plan. Stakeholder outreach efforts proposed as part of these program elements will seek to engage disadvantaged communities, identify environmental justice concerns, and seek solutions that are in keeping with the needs of all of the Region's communities.

Table H-3
Summary of Projects Benefiting Disadvantage Communities[1]

Project Name	Planning	Implementation within DAC	Regional Implementation	Education	Acquisition
51st St. Headwater Canyon Restoration		√			
Campo Creek Erosion, Habitat and Groundwater Recharge Improvement		√			
Campo Creek Watershed Groundwater Management Plan	√				
Chollas Creek Watershed Opportunities Assessment	√				
Cielo Azul property Acquisition					√
Conservation in the Campo Valley					√
County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge		√			
East County Regional Treated Water Improvements		√			
East Riparian Corridor				√	
Educational Demonstration Wetland				√	
El Monte Valley Groundwater Recharge		√			
Forester Creek Improvement		√			
Grease – In the Can, Not the Drain				√	
Green Mall LID Porous Paving and Infiltration		√		√	
Implementation of Agricultural Efficiency Programs			√	√	
Implementing Improvements to the Rose Creek Watershed: Controlling Invasive Exotic Species		√			
Implementing Improvements to the Rose Creek Watershed: Enhancing the Connection of Rose Creek to Mission Bay		√			
Integrated Commercial/Industrial/Institutional and Residential Indoor Conservation Programs.			√	√	
Joint Water Agency Natural Community Conservation Plan/ Habitat Conservation Plan (JWA NCCP/HCP): Initial Implementation	√				
La Jolla Shores Ocean Protection				√	
Lake Morena Oak Shores Mutual Water Company Upgraded Residential Water Line Connections		√			
Las Californias Binational Conservation Initiative: A Vision for Habitat Conservation and Watershed Protection					√
Mountain Empire Watershed Preservation Program – "Pollution Prevention Education"				√	
Municipal Rooftop Rain Harvesting and Downspout Disconnections		√			
Northern San Diego County Invasive Non-Native Species Control Program		√			
Recycled Water Retrofit Assistance Program			√		
San Diego County Rural Community Watershed Councils (primarily targeting inland areas not served by CWA/MWD infrastructure)				√	
San Diego National Wildlife Refuge - Otay Unit Land & Crestridge Linkage Acquisition					√
San Diego Regional Water Quality Assessment and Outreach		√		√	
San Elijo Water Reclamation Facility Storage Optimization				√	
Santa Margarita Watershed Water Supply Augmentation, Water Quality Protection, and Environmental Enhancement Program	√				
South San Diego County Water Supply Strategy	√				
Tertiary Wastewater Treatment Upgrade				√	
The Sweetwater River Watershed Management Plan	√				
Von Saggern property Acquisition					√
Water Brooms for Schools and Fast Food Restaurants		√		√	
Watershed-Based Street Sweeping Program		√			
West Riparian Corridor				√	
Wetland Expansion Science & Technology Against Runoff (WESTAR II)		√		√	

1 Benefits to disadvantaged communities identified by project proponents.

H.6 Benefits and Impacts to Other Resources

While proposed IRWM Plan water management activities are focused on habitat, water quality, flood control, water supply, and other such water management issues, implementation of the Plan will affect other resources of the Region.

Air Quality. Air quality may be impacted by wastewater treatment operations or by transportation-related aspects (e.g. trucking needs, travel to recreational or projects sites) associated with the proposed water management projects. Air quality effects will be addressed, and if necessary mitigated, as part of project-specific or programmatic environmental analyses (CEQA and if applicable NEPA).

Cultural Resources. As documented above, proposed water management projects that result in conserving existing lands will result in preserving onsite cultural resources. Any potential impacts on cultural resources will be addressed, and if necessary mitigated, as part of project-specific or programmatic environmental analyses (CEQA and if applicable NEPA).

Mineral Resources. The availability of mineral resources (such as sand and gravel extraction) may be impacted by proposed land conservation projects or habitat restoration projects that would render the resources unavailable to development.

Power Generation. While electrical power will be required for implementing proposed potable, groundwater, and recycled water projects, projects that result in decreased need for imported water will yield a net benefit to regional power use and generation. Approximately 2,000 kilowatt-hours are required to pump an acre-foot of Colorado River water to the County, and approximately 3,500 kilowatt-hours are required to pump an acre-foot of State Water Project water to San Diego. Discounting power needs for local conveyance within the County, unit power consumption needs for developing local supply sources (including groundwater, groundwater demineralization, seawater desalination, and recycled water treatment) are far less than the associated unit power demands for pumping imported water into the Region.

Section H References

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