Summary of Existing IRWM Plan

The adopted IRWM Plan (Plan) for the Greater Los Angeles County Region (Region) acknowledges the Region's substantial reliance on imported water, both from the Sacramento-San Joaquin Delta and the Colorado River. The Regional Description (Chapter 2 of the Plan, written in 2006) acknowledged:

Environmental concerns in the Sacramento-San Joaquin Delta have limited the volume of water that can be pumped from the State Water Project (SWP). The potential impact of further declines in ecological indicators in the Bay-Delta system on SWP water deliveries is unclear. Uncertainty about the long-term stability of the levee system surrounding the Delta system raises concerns about the ability to transfer water via the Bay-Delta to the SWP.

The Plan includes a single objective related to water supply:

- Optimize local water resources to reduce the Region's reliance on imported water.

The Plan (on pages 3-2 and 3-3) identifies a range of options to optimize local water resources, including:

- Rehabilitation and expansion of recharge facilities, modified operation of existing storage facilities, and rehabilitation and enlargement of upstream storage capacity, and optimization of operational practice.
- To Increase the utilization of this local resource, runoff capture and infiltration could be expanded (where appropriate), the quality of surface runoff improved, and projects implemented to capture, treat, and utilize stormwater for either non-potable direct use or recharge.
- Aggressive adoption of additional [water conservation] measures, such as public outreach, ultra low-flush toilets, and evapotranspiration-based irrigation controllers.
- Expansion of [recycled water] distribution systems and the creation of new storage facilities could facilitate increased production and expand the utilization of this local resource for direct non-potable reuse (e.g., landscape irrigation) and groundwater recharge.
- Additional research and supporting studies will be needed to optimize [sweater desalination] treatment technology, develop pretreatment alternatives, resolve brine

disposal management issues, and identify appropriate mitigation for any adverse environmental impacts.

In addition to these general concepts, the Plan also included numerical planning targets for water supply, water quality, habitat, open space, and water resource infrastructure, including:

- Increase water supply reliability by providing 800,000 acre-feet/year (AFY) of additional water supply and demand reduction through conservation.

To help meet the water supply target, the Plan identified the following elements of an expanded water resource portfolio for the Region:

- Expansion of recycled water utilization by 130,000 AFY;
- Reduction and reuse of 150,000 AFY of dry weather urban runoff (and the capture and treatment of an additional 170,000 AFY);
- Reduce and reuse 220,000 AFY of stormwater runoff from developed areas (and the capture and treatment of an additional 270,000 AFY); and
- Treatment of 91,000 acre-feet/year of contaminated groundwater (thus making those supplies available for use).

Implementation of projects and programs consistent with the water supply objective and the water supply and water quality planning targets would substantially reduce demand for additional potable water, even with projected population increases in the Region.

The 13 projects included in the Proposition 84 Implementation Grant Proposal are all consistent with the water supply objective and would contribute to the associated planning targets, as six of the projects would enhance groundwater recharge, 6 projects would reduce water demand, and the remaining project would preserve utilization of existing surface water supplies, Thus, all of the projects in the Proposal will reduce dependence on imported water, including water exported from the Delta.

Pending Plan Revisions

Consistent with DWR requirements, the adopted IRWM Plan will be revised to update information as needed and to meet new IRWM Plan Standards. The content of these revisions to the Plan were articulated in a Proposition 84 Planning Grant Application, which was submitted to DWR in September 2010.

The Work Plan (Attachment 3 to the Grant Application) includes the following description (on pages 51-52) regarding the need to revisit and update the Plan Objectives and Planning Targets:

"The planning objectives in the adopted IRWM Plan are grouped under the following goals: improve water supply, improve water quality, enhance habitat, enhance open space and sustain infrastructure for local communities. The objectives were developed to address each of the goals when planning at the Regional and Subregional levels.

The existing objectives will be reviewed and updated as needed to assure they continue to address the Program Preferences and Statewide Priorities (discussed above in Section A3) and to more directly address the following three Program Preferences and Statewide Priorities:

- Effective Integration of Water Management with Land Use Planning (Program Preference).
- Integrated Flood Management (Statewide Priority).
- Climate Change using the "no regret" adaptation strategy (Statewide Priority).

The objectives in the adopted Plan are not prioritized and are not anticipated to be prioritized in the updated Plan. An explanation of why the objectives are not prioritized will be added in the updated Plan.

Within the Region, there are five Subregions. Each of these Subregions has their own geographic, social, economic and cultural characteristics. Based on these differences, each Subregion has specific planning needs, many of which are distinct from other Subregions. As a result, most of the Subregional Steering Committees have and will continue to prioritize the objectives for Subregional planning based on the individual needs of each Subregion. This process of prioritizing the objectives at the Subregional level will be acknowledged in the updated Plan.

The adopted IRWM Plan also includes quantified planning targets: numerical goals that correspond to each of the plan's objectives. ***These planning targets will be reviewed and updated as appropriate to reflect current conditions, such as current pumping restrictions in the Delta and the updated Integrated Resources Plan of the Metropolitan Water District. New planning targets will be added, if necessary.***" (Emphasis Added)

Thus, the Planning Grant Application recognizes that the water supply assessment in the adopted Plan must be updated to address current conditions and that the objectives and planning targets may have to be adjusted accordingly.

In addition, the Planning Grant Work Plan (on Page 58) also acknowledged the description of the Region's "Sources of Water Supply" would need revision to:

- Update "Sources of Water Supply" to reflect new information (e.g., Delta pumping restrictions, Colorado River shortage guidelines); and
- Add discussion of potential effects of climate change on water sources.

It is anticipated that the existing Water Supply objectives and the Planning Targets for water supply, recycled water, urban and stormwater runoff, and groundwater remediation will be retained, and it is feasible that those targets will need to be increased to reflect potential reductions in imported water supplies, including water exported from the Delta.

Assurance that the Plan will Continue to Reduce Delta Water Dependence

The Region has repeatedly made commitments to reduce dependence to Delta water by re-committing during the Plan updates and by providing local funding to increase regional self-sufficiency. The discussion presented above summarizes how Plan updates continue to provide assurances to reduce imported water dependency in the Region. The planning and implementation grant applications continue to emphasize this commitment. In the recent proposal to update its IRWM Plan, the Region committed $212,560 in local contributions and in-kind services for that purpose. In this application for Proposition 84 Implementation Grant, Round 1 funding, the Region estimates that the total cost of implementing the 13 projects is approximately $122,004,223. Of that amount, $88,560,141 will come from local sources and $1,444,082 will come from other state sources, while it is hoped that $32,000,000 will be reimbursed by the State with the award of this grant.

Excerpts:

Excerpts from Proposition 50 Implementation Grant Application

The Proposition 50 Implementation Grant Application included several sections that recognized the importance of reducing reliance on water supplies from the Delta. It also included many projects striving to achieve regional self-sufficiency. Excerpts from the Proposition 50 Implementation Grant Application are included in the "Excerpts that Support Reduction of Dependence on Sacramento-San Joaquin Delta Water Supply" section below.

IRWM Plan Objectives (page 3-2)

Greater Los Angeles County Integrated Regional Water Management Plan

Table 3-1. Greater Los Angeles County Region Objectives and Planning Targets for Year 2026 - To Promote an Integrated, Multi-Benefit, Inter-Regional Approach to Regional Water Management and Planning

Objectives	Planning Targets
Improve Water Supply	
Optimize local water resources to reduce the Region's reliance on imported water.	Increase water supply reliability and quality by providing 800,000 acre-feet/year of additional water supply and demand reduction through conservation. Included within the 800,000 acre-feet/year noted above, reuse or infiltrate 130,000 acre-feet/year of reclaimed water (110 percent increase over existing reclaimed water use).
Improve Water Quality	
Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater.	Dry Weather: Reduce and reuse 150,000 acre-feet/year (~40 percent), and capture and treat, an additional 170,000 acre-feet/year (~50 percent); (~90 percent of estimated total dry weather flow). Wet Weather: Reduce and reuse 220,000 acre-feet/year of stormwater runoff from developed areas (~40 percent), and capture and treat an additional 270,000 acre-feet/year (~50 percent); (~90 percent of estimated total wet weather flow).
Protect and improve groundwater and drinking water quality.	Treat 91,000 acre-feet/year of contaminated groundwater (1.82M acre-feet in 20 years)
Enhance Habitat	
Protect, restore, and enhance natural processes and habitats.	Restore 100+ linear miles of functional riparian habitat and associated buffer habitat. Restore 1,400 acres of functional wetland habitat.
Enhance Open Space and Recreation	
Increase watershed friendly recreational space for all communities.	Develop 30,000 acres of recreational open space, focused on under-served communities.
Sustain Infrastructure for Local Communities	
Maintain and enhance public infrastructure related to flood protection, water resources and water quality.	Repair and/or replace 40 percent of the aging infrastructure.

Improve Water Supply

Optimize local water resources to reduce the Region's reliance on imported water

Most years, the San Gabriel Mountains receive substantial rainfall and existing dams and natural storage slowly release runoff, providing an important source of high-quality and low-cost water that can be treated for direct use or recharged into groundwater basins for later use. At several locations, recharge is limited by the capacity of existing recharge facilities. Rehabilitation and expansion of recharge facilities, modified operation of existing storage facilities, and rehabilitation and enlargement of upstream storage capacity, and optimization of operational practices could improve the utilization of this local water source.

Recharge or direct reuse of runoff from urbanized areas is generally limited by concerns about the presence of contaminants. To increase the utilization of this local resource, runoff capture and infiltration could be expanded (where appropriate), the quality of surface runoff improved, and projects

IRWM Plan Targets (page 3-3)

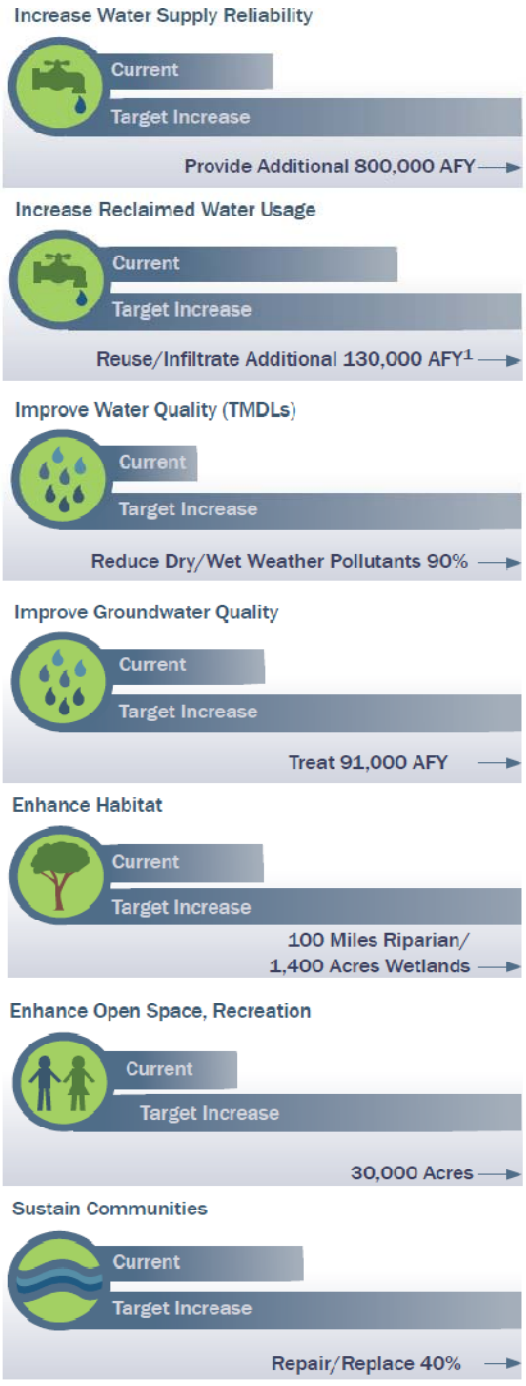

Figure 3-1. Planning Targets. The IRWMP leadership committee has carefully created 20-year targets and strategies that usher in a new era of integrated solutions and more cost effective use of public resources.

The San Jose Creek Water Reclamation Plant in the Upper San Gabriel River Subregion provides over 90,000 acre-feet/year of recycled water to the Region however, there is still over 300,000 acre-feet/year of treated effluent disposed to the ocean, offering a significant opportunity for recycled water expansion.

implemented to capture, treat, and utilize storm-water for either non-potable direct use or recharge.

The widespread implementation of water conservation projects and programs has resulted in significant reductions in demand throughout the Region. Aggressive adoption of additional measures, such as public outreach, ultra low-flush toilets, and evapotranspiration-based irrigation controllers will be needed to continue progress.

Although local wastewater treatment plants produce substantial amounts of recycled water, due to demand and infrastructure limitations, not all of this production is currently utilized to augment water supply, resulting in the discharge of excess supplies to the rivers and creeks. Expansion of distribution systems and the creation of new storage facilities could facilitate increased production and expand the utilization of this local resource for direct non-potable reuse (e.g., landscape irrigation) and groundwater recharge.

Desalination is being considered by some coastal agencies to improve supply reliability and reduce dependence on imported water. Seawater desalination has become more economical in recent years due to improvements in membrane technology, plant siting strategies, and increased costs for traditional water treatment. Additional research and supporting studies will be needed to optimize treatment technology, develop pretreatment alternatives, resolve brine disposal management issues,

[1] Reuse or infiltrate 130,000 acre-feet/year of reclaimed water is included within the 800,000 acre-feet/year noted above.

IRWM Step 2 Implementation Grant Proposal for Proposition 50, Chapter 8

In the Region's IRWM Step 2 Implementation Grant Proposal for Proposition 50, Chapter 8 funding, submitted on June 28, 2006, the grant application identified Proposal goals listed below in an excerpt from **Proposition 50 Work Plan (page 5-5)**. Reflecting the high priority that the Region places on reducing dependency on imported supplies, the first goal is "reduce dependence on imported water." All of the goals directly or indirectly help reduce dependence on the Delta; particularly the goals of "optimize use of local water resources" and "enhance water supply reliability". The following excerpt is from **page 5-1** of the **Proposition 50 Work Plan**.

This Proposal is comprised of a set of thirteen priority projects that will deliver a strong combination of water supply, water quality and other benefits. This set of high priority projects was developed through the Region's Integrated Regional Water Management (IRWM) planning process and, when implemented will:

- Develop new local water supplies, protect existing supplies, and promote water conservation to increase local water supply reliability and reduce dependence on imported water.

The following excerpt is from **page 5-5.**

Proposal Goals and Objectives

Recognizing the tremendous water resource and quality of life needs for the Region, the Regional Water Management Group, referred to as the Leadership Committee in the Draft IRWM Plan, has established nine water management goals for both the IRWM Plan and this Proposal. These goals are:

1. Reduce dependence on imported water
2. Optimize use of local water resources
3. Enhance water supply reliability
4. Improve the quality of urban runoff and stormwater
5. Maintain and enhance flood protection
6. Increase watershed-friendly recreation and accessibility to open space for all communities
7. Conserve and restore native habitat
8. Manage public open spaces to reduce the risk of wildlands fires
9. Promote the application of watershed approaches to resource management issues

The IRWM Step 2 Implementation Grant Proposal for Proposition 50, Chapter 8 included several other sections that recognized the importance of reducing reliance on water supplies from the Delta. The following is from **page 5-1 of the Proposition 50 Work Plan**.

The Greater Los Angeles County Region (Region) covers an area of over 2,000 square miles and, as home to more than 10 million people, is the most populous county in the United States. The people and resources of this region serve as an economic engine for both the State of California and the rest of the nation. Its climate, beaches, culture and other attractions draw tens of millions of visitors every year to California. Meanwhile, its economic opportunities every year draw tens of thousands of new residents to the Region.

However, the growth, success and importance of the Region have created serious water management issues:

- Imported water from the environmentally strained Sacramento Delta, the over-allocated Colorado River and the sensitive Owens Valley meets roughly ½ of the Region's water needs, either through direct delivery, storage or transfers (Metropolitan Water District of Southern California (MWD) Integrated Resources Plan (IRP), 2003).

Projects from the IRWM Step 2 Implementation Grant Proposal for Proposition 50, Chapter 8 aimed toward achieving IRWM Plan targets. The following can be found on **page 5-7 of the Proposition 50 Work Plan**.

Addresses Identified Gaps

The Draft IRWM Plan established a number of quantifiable planning targets for a 20 year time horizon. Gaps between future planning targets and current resource levels are being determined for all of the targets. Implementation of the IRWM Plan is designed to fill these gaps. The planning targets and associated gaps are expressed in terms of:

- Volume of additional water supply that would be created
- Volume of water conservation that would be achieved
- Volume of recycled water that would be utilized
- Volume of dry weather runoff that would be captured and treated
- Amount of aging flood management infrastructure replaced
- Volume of stormwater runoff that would be captured and treated
- Linear miles of riparian habitat that would be restored
- Acres of new watershed-friendly parkland and open space

All projects included in this Proposal have been selected for their ability to offer quantifiable benefits that contribute towards filling at least one of the identified gaps, and many projects offer benefits addressing multiple gaps. With the exception of the target for repair and replacement of flood management infrastructure, which is not an immediate priority, all of the gaps listed above are addressed by at least one project in the Proposal.

The following excerpt (**page 3-6 of the IRWM Plan**) gives further detail on how the projects from this application increase regional self-sufficiency.

3.3 Planning Targets

To establish quantified benchmarks for implementation of the Plan, planning targets have been defined based on much discussion with the relevant agencies and stakeholders, which amplify the objectives above and provide more definition to the Region's major water resource needs over the next 20 years. Although the IRWMP is intended to address the Region's water resource management needs, this document also identifies several open space and habitat targets, as the implementation of water supply and water quality projects have the potential to contribute towards these other Regional needs. In addition, habitat, open space, and parkland projects have the potential to generate water supply and water quality benefits. The planning targets are summarized in Table 3-1 and are discussed in the following sections.

Improve Water Supply

Increase water supply reliability by providing 800,000 acre-feet/year of additional water supply and demand reduction through conservation

As discussed in Section 2, the Region's current water supplies (for a single dry year) were estimated at approximately 2.55 million acre-feet/year (assuming SWP deliveries in a single dry year would be 5 percent of entitlement). By comparing the Region's current supply to an estimate of future demand, the difference between water demand and

supply was estimated to be approximately 800,000 acre-feet/year.

Varying two key assumptions used in the analysis of supply and demand produces a considerable range. The estimated future supply "gap" of 800,000 acre-feet/year noted above is based on estimates of future supply and demand developed by the Metropolitan Water District and apportioned to the Region for the purposes of the IRWMP. Metropolitan's IRP established "targets" for future water supplies which include a buffer against the potential loss of existing water supplies. By eliminating the buffer against supply loss, the Region's planning target would drop to 580,000 acre-feet/year. Alternatively, if the Region was asked to absorb Metropolitan's entire supply loss buffer (which may be unlikely), then the Region's planning target would increase. If Metropolitan's water supply targets were increased, then the Region's planning target would also increase. By combining these two assumptions (i.e., the Region absorbs the Metropolitan's entire supply loss buffer and the Metropolitan's supply targets are increased by 25 percent), then the Region's planning target would increase to 1.87 million acre-feet/year.

Included in the 800,000 acre-feet/year target noted above, reuse or infiltrate 130,000 acre-feet/year of recycled water

The Region produces substantial amounts of recycled water, but this production exceeds current demand. Expanding opportunities for utilization of this local resource for direct non-potable reuse, indirect potable reuse, injection into seawater intrusion barriers in coastal groundwater basins, and recharge through groundwater recharge basins, could displace the need to import, pump and/or treat "new" water and would improve water supply reliability. This will require enhanced treatment, expanded distribution systems, rehabilitation of existing infrastructure, and the identification of new customers and/or new uses for recycled water.

This target recognizes the substantial volume of current production (approximately 120,000 acre-feet/year) and suggests that with aggressive expansion of existing systems, production and utilization could be increased and perhaps more than doubled (to 250,000 acre feet/year) over the next 20 years. This target is subsumed within the above planning target for water supply.

To meet these challenges and needs, this Proposal presents a mixture of projects that move the Region toward realizing each of the IRWM Plan objectives. The objectives are matched with the general purpose of the projects, as presented below.

- Local water resources are optimized with projects that expand groundwater recharge by increasing the ability to use stormwater and recycled water for replenishment supplies as well as replacing potable supplies through the use of non-potable recycled water and water use efficiency programs.
- Water quality standards are met with projects that improve the quality of stormwater runoff and wastewater effluent through natural and engineered improvements to treatment.
- Groundwater supplies are protected and improved with projects that increase the capacity to recharge stormwater and treat recycled water to advanced levels for use in seawater barriers.

- Natural processes and habitats are protected, restored, and enhanced with projects that increase open space use and recreational opportunities adjacent to groundwater recharge facilities, minimize impacts of recreational activities to water quality, ensure the ability to keep parks green through the use of non-potable supplies, and improve quality of stormwater runoff.
- Watershed friendly recreational space for all communities is expanded at stormwater capture and groundwater recharge facilities in both DACs and non-DAC areas.
- Public infrastructure is maintained and enhanced with projects that accomplish the following:
- Add flood protection on city streets and maintain regional flood control objectives while providing enhanced water quality and recreational benefits.
- Expand recycled water treatment and distribution systems.
- Improve treatment levels at wastewater and surface water treatment plants that will allow for local supplies to be used at a higher beneficial use.
- Improve stormwater capture facilities.
- Invest in innovative water efficiency devices to conserve both potable and non-potable supplies.
- Improve the operational efficiency of an interconnected multi-agency recycled water system.

Local Funding

The following excerpts provide details on how the region will provide the local funding to increase regional self-sufficiency.

The following excerpt from the **Proposition 50, Chapter 8 grant application** can be found on **page 5-1:**

The Regional Water Management Group and stakeholders understand that local funding is and will remain central to solving the Region's water management challenges and all parties are taking active steps toward raising billions of dollars through local funding measures and rate adjustments. However, much of these funds will not be available to implement projects for many years. Proposition 50, Chapter 8 State funding is therefore critical in the short-term to fund priority projects that are important first steps towards addressing the water resource and management needs of the Region.

The following excerpt from the **Prop 50 grant application** can be found on **page 5-6**, where the sixth and ninth bullets discuss funding:

Short and Long Term Priorities

The short term priorities of the Draft IRWM Plan are:

- Utilize a regional and sub-regional committee structure for development and implementation of the IRWMP
- Complete the Greater Los Angeles County IRWM Plan by January 1, 2007
- Articulate quantifiable planning targets for water supply, water quality, flood management, and open space/ habitat
- Determine which water management strategies can contribute to meeting the identified objectives
- Identify projects that will meet the gap between existing projects and the regional planning targets
- Maximize funding opportunities for project implementation from local, State and Federal sources

All projects included in this Proposal address the last three short-term priorities. In particular:

- All projects are representative of identified water management strategies that have been developed to address the objectives identified in the Draft IRWM Plan
- All projects are a part of a suite of projects designed to meet the Draft IRWM Plan's 20-year planning targets
- Projects are being implemented to serve as demonstration projects that will help to both attract additional outside funding and to help persuade the people of the Region to create additional local funding sources for similar projects