



*San Gabriel Mountains*

**The San Gabriel Mountains are a significant source of water supply for the Region.**

## 1.1 Background

This Integrated Regional Water Management Plan (IRWMP or Plan) reflects the Greater Los Angeles County (GLAC) Region’s collaborative efforts to ensure a sustainable water supply through the more efficient use of water, the protection and improvement of water quality, and environmental stewardship. Ensuring the delivery of clean and reliable water in this century, agencies and jurisdictions in the Region will benefit from a visionary plan that integrates water supply, water quality, flood management and open space strategies; and maximizes the utilization of local water resources.

To meet the demand for water in the Region, (as depicted in Map 1-1) over the last century, federal, state, and local agencies developed creative plans and implemented large projects to move vast quantities of water great distances. Therefore, the Region is now reliant on supplies that vary with the climate fluctuations across numerous states. At the same time, the quantity and quality of local supplies are threatened with degradation over time. The need to protect lives and property from flooding resulted in extensive channelization and modification of the rivers and streams on the coastal plain and inland valleys. The flood protection system was designed to efficiently convey storm runoff away from urban areas and into the ocean. Unfortunately, this efficient flood protection system is also very efficient in conveying pollutants generated as a result of urbanization which has over time degraded the quality of the region’s surface water resources.

Historically, water agencies in the Region have tapped a variety of sources, implemented new technologies, responded to evolving regulatory requirements, and navigated changing political conditions to deliver ample supplies. As a result, the Region has one of the broadest and most diverse water supply portfolios in California. However, the long-term sustainability of the Region’s water supply faces increasing challenges.

As noted in the California Water Plan Update 2009 (Bulletin No. 160-09):

*“The watersheds of the Metropolitan Los Angeles Planning Area have been subjected to some of the densest urbanization in California and have issues associated with urban runoff, groundwater contamination, and the loss of major historical ecosystems.”*

This Plan also provides an opportunity to include information on the Region’s needs and future at a scale that can contribute to the California Water Plan.

## 1.2 Context

Cooperation at a regional scale is not new. Flood control districts, sanitation districts, and wholesale water agencies have a long tradition of working across jurisdictional boundaries to implement projects that have multiple benefits. However, most resource management agencies were originally formed with single-purpose missions, which limit their ability to develop and implement multi-purpose programs and projects. Yet, in recent years, the potential for a transformation of the watersheds

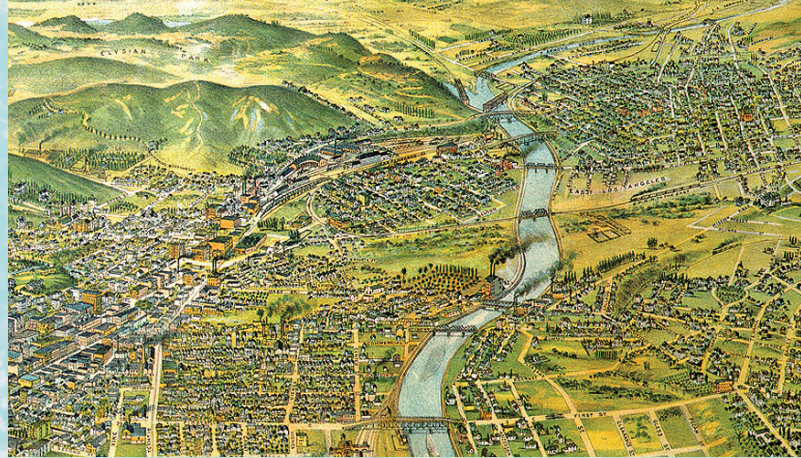
in this Region has emerged, beginning with visions of restoring the Los Angeles and San Gabriel Rivers, development of watershed management plans on most of the major tributaries and creeks, and the preparation of Integrated Resources Plans (IRPs) by local agencies. These plans promote integrated efforts to manage resources and recognize that water and watershed resources are interconnected. Thus, the concept of integrated regional water management in this Region is not new.

This IRWMP is an outgrowth of ongoing efforts to develop plans, projects, and programs at regional levels, and utilize an integrated approach to water and other resource management issues and acknowledges that for the Region to meet its future needs, water supply planning must be integrated with other water resource strategies. These strategies consist of water conservation and urban stormwater runoff management, wastewater quality improvements and expanded use of recycled water, maintenance of flood protection, and other environmental needs including habitat and open space conservation and the provision of sufficient park space. In a region facing significant urban



Map 1-1. Greater Los Angeles County Integrated Regional Water Management Region

## PAST AND PRESENT



*Historic illustrated map of the Los Angeles Basin*



*“The River” (courtesy of the San Gabriel Mountains Regional Conservancy)*



*Local stormwater runoff is collected in a comprehensive set of groundwater recharge basins throughout the Region.*

*Figure 1-1. Region History. While the Region’s rivers historically provided ample water supply, exponential population growth over the last century has required creative solutions to meet demands.*

challenges such as population growth, densification, traffic congestion and poor air quality, water resource management also must be integrated with other urban planning issues. This IRWMP suggests a proactive approach to addressing the Region's water resource needs, based on a vision established through extensive stakeholder input that is consistent with planning principles identified in regional planning documents such as the SCAG Compass Growth Vision Report (SCAG, 2004).

To define benchmarks for a more sustainable water future, the GLAC Region has established objectives supported by quantifiable planning targets for water supply, water quality, flood management, habitat, and open space. These targets identify the magnitude of the Region's major water resource management issues and also provide a basis for estimating the need for implementing projects and programs to meet these targets.

In the coming decades, water supply and conservation projects and programs will compete for limited fiscal resources with concurrent efforts to improve urban and stormwater runoff quality. With the cost of compliance with surface water quality regulations estimated to range from \$43 to \$284 billion (Brown and Caldwell, 1989 and Gordon, et al, 2002), jurisdictions and agencies in the Region face difficult funding choices. The integration of multiple water management strategies via multipurpose projects creates opportunities to meet regional water resource needs, efficiently use fiscal resources, and provide the public with tangible community benefits. It is within this context that the following Plan is presented.

### 1.3 Mission and Purpose

The mission of this IRWM Plan is to address the water resources needs of the Region in an integrated and collaborative manner to improve water supplies, enhance water supply reliability, improve surface water quality, preserve flood protection, conserve habitat, and expand recreational access in the Region. This Plan is also intended to define a comprehensive vision for the Region which will generate local funding, position the Region for future state bonds, and create opportunities for federal funding.

### 1.4 IRWMP Process

The GLAC IRWM Region boundaries include approximately 10 million residents, portions of four counties, 84 cities, and hundreds of agencies and districts. To make governance and stakeholder involvement manageable, the Region was organized into five Subregions (depicted on Map 1-2) which acknowledges both geographic and demographic variations over the 2,058 square mile area. These Subregions are listed below.

- Lower San Gabriel and Los Angeles Rivers (Lower SG & LA)
- North Santa Monica Bay (North SM Bay)
- South Bay
- Upper Los Angeles River (Upper LA)
- Upper San Gabriel and Rio Hondo Rivers (Upper SG & RH)

The organizational structure for the Region is defined by an overall Regional Leadership Committee (LC) and five Subregional Steering Committees (SC). This structure provides oppor-

**The mission** of The Greater Los Angeles County Integrated Regional Water Management Plan is **“to address the water resources needs of the Region in an integrated and collaborative manner.”**

tunities for coordination, integration of decision-making, and stakeholder input from both regional and local perspectives.

### Leadership Committee

Consistent with Sections 10530 - 10546 of the Water Code, preparation of an IRWMP must be guided by a Regional Water Management Group (RWMG) composed of three or more local public agencies, at least two of which have statutory authority over water supply, formed by means of a joint powers agreement, memorandum of understanding (MOU), or other written agreement that is approved by the governing bodies of the local public agencies. Consistent with the IRWMP guidelines, the GLAC Region's RWMG is the LC which is composed of signatories to a MOU (see Appendix A).

The GLAC Region's LC has 16 voting members, as shown in Figure 1-2, including the LC Chair; Chairs and Vice-Chairs of the five Subregional Steering Committees; and five stakeholder agencies representing the following Water Management Areas: Groundwater, Surface Water, Sanitation, Open Space, and Stormwater.

Each of the ten Subregional SC representatives to the LC are elected by the SCs as Chairs and Vice-Chairs of their SCs. The alternate representatives to the LC for each of the five Subregions, also serve as alternates to the Chairs and Vice-Chairs on the SCs. Both the Subregional Chair and Vice-Chair representatives are elected by a majority vote of each Subregional SC according to the Operating Guidelines. The Operating Guidelines define the structure of the Region's LC and SCs, including how the LC and SCs are formed, roles and responsibilities of members, and guidelines for transparency and funding contributions, and rules defined by each SC. The five Water Management Area LC members are elected from nominations provided by SCs and must meet certain professional requirements outlined in the Operating Guidelines. All LC member terms are reviewed at least every three years.

The Leadership Committee also includes five ex-officio (non-voting members), including: California State Coastal Conservancy, United States Bureau of Reclamation (USBR), United States

Department of Agriculture (USDA) Forest Service: Angeles National Forest, United States Department of the Interior, National Park Service, United States Army Corps of Engineers (Army Corps): Los Angeles District.

The LC holds monthly publically noticed meetings to provide overall program guidance, address regional issues and provide collaboration and coordination between the Subregions. LC meeting agendas and minutes are posted on the GLAC IRWM website ([www.lawaterplan.org](http://www.lawaterplan.org)), on the project database website and are made available to those without computer access by contacting Los Angeles County Flood Control District (LACFCD) staff.

The specific management responsibilities of the LC voting members as relates to water management are summarized below.

### Chair

**Los Angeles County Flood Control District.** The LACFCD chairs the LC. LACFCD provides for the control and conservation of the flood, storm, and other waste waters of the LACFCD. It also conserves such waters for beneficial and useful purposes by spreading, storing, retaining or allowing them to percolate into the soil within the LACFCD. The LACFCD also protects the harbors, waterways, public highways and property in the LACFCD from damage from such waters and may provide for recreational use of LACFCD facilities. The LACFCD was created in 1915 and now operates and owns 14 major dams, 18 rubber dams, 481 miles of open channels, 3,200 miles of underground storm drains, 81,526 catch basins, 48 stormwater pumping plants, 162 sediment entrapment basins, 257 concrete crib check dams, 27 groundwater recharge facilities (operated but not necessarily owned), 36 sediment placement sites, and three seawater intrusion barriers composed of over 290 injection wells.

In January 1985, the LACFCD consolidated with the County Engineer and the County Road Department to form the Department of Public Works. The Director of the Department of Public Works is therefore the Chief Engineer of the District, the County Engineer, and the Road Commissioner.

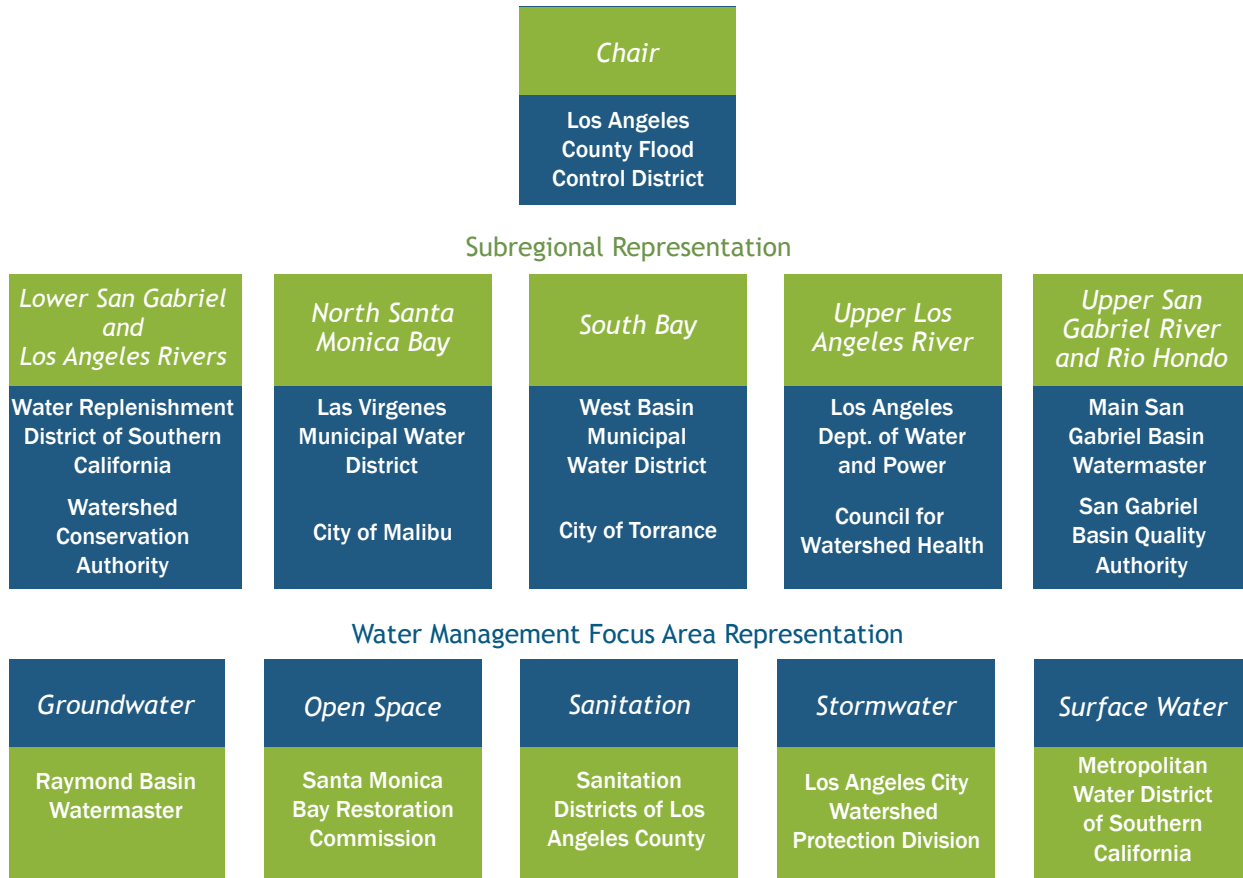


Figure 1-2. Leadership Committee Representation. The Leadership Committee consists of representatives from each Steering Committee and each Water Management Area.

**Lower San Gabriel and Los Angeles Rivers Subregion**

**Water Replenishment District of Southern California (WRD).** WRD is the Chair of the Lower SG & LA SC. WRD manages groundwater for nearly four million residents in 43 cities of Southern Los Angeles County and is the official Groundwater Level Monitoring Entity for the Central Basin and West Coast Basin.

**Watershed Conservation Authority (WCA).** The WCA is the Vice-Chair of the Lower SG & LA SC. WCA is a joint powers entity between the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) and LACFCD whose focus is to provide multiple benefits such as open space, habitat restoration, and recreational opportunities in the San Gabriel and Lower Los Angeles Watersheds.

**North Santa Monica Bay Subregion**

**Las Virgenes Municipal Water District (Las Virgenes MWD).** Las Virgenes MWD is the Chair of the North SM Bay SC. Las Virgenes MWD provides potable water, wastewater treatment, recycled water and biosolids composting to more than 65,000 residents in the cities of Agoura Hills, Calabasas, Hidden Hills, Westlake Village, and unincorporated areas of western Los Angeles County. Las Virgenes MWD maximizes water resources by bringing water full circle. Wastewater is treated to be beneficially used as recycled water and biosolids converted to compost.

**City of Malibu.** The City of Malibu serves as the Vice-Chair of the North SM Bay on the LC. Malibu was incorporated on March 28, 1991 and is located in Northwest Los Angeles County. The City has 21 miles of coastline along the Pacific Ocean and has a population of 12,645 (2010 U.S. Census).

### South Bay Subregion

**West Basin Municipal Water District (West Basin MWD).** West Basin MWD is the Chair of the South Bay SC. West Basin MWD is a public agency that wholesales imported water to cities, investor-owned utilities and private companies in the South Bay and unincorporated areas of Los Angeles County, serving a population of more than 851,000. In addition, West Basin MWD provides recycled water for municipal, commercial, and industrial uses. West Basin MWD owns the Edward C. Little Water Recycling Facility in El Segundo, where approximately 32,000 acre-feet per year (AFY) of secondary treated wastewater from Hyperion Treatment Plant is additionally treated and distributed throughout the Region. Formed in 1947, West Basin MWD is committed to ensuring a safe and reliable water supply for the Region.

**City of Torrance.** City of Torrance is the Vice-Chair of the South Bay SC. Torrance was incorporated in 1921 and has a population of 145,438 at the 2010 census. This residential and light high-tech industries city is also home to the one of the country's few urban wetlands, the Madrona Marsh.

### Upper Los Angeles River Subregion

**City of Los Angeles Department of Water and Power (LADWP).** LADWP is Chair of the Upper LA SC. LADWP is responsible for delivering water to 640,000 customers (including households, multi-family dwellings, and businesses) and electricity to 1.4 million customers in the City of Los Angeles.

**Council for Watershed Health (Council).** The Council is Vice-Chair of the Upper LA SC. The Council is a non-profit regional hub for watershed research and analysis. Its mission is to facilitate an inclusive consensus process to enhance the economic, social, and ecological health of the Region's watersheds through education, research, and planning. The Council manages the Water Augmentation Study, initiated in 2000 to determine the feasibility of stormwater recharge for water supply and quality improvement, conducts watershed-wide monitoring programs for the Los Angeles and San Gabriel Rivers, and provides a robust program of trainings, symposia, and conferences on topics ranging from designing sustainable landscapes to adapting to climate change.

### Upper San Gabriel and Rio Hondo Rivers Subregion

**Main San Gabriel Basin Watermaster (MSG Watermaster).** The MSG Watermaster is the Chair of the Upper San Gabriel and Rio Hondo SC. The MSG Watermaster is the agency charged with administering adjudicated water rights within the watershed and managing groundwater resources in the Main San Gabriel Basin.

**San Gabriel Basin Water Quality Authority (WQA).** The WQA represents the Upper SG & RH SC on the LC. The WQA was created by the state in 1993 to address the problem of groundwater contamination in the San Gabriel Valley. The WQA is empowered to address the problem of the migration of contaminated groundwater within the San Gabriel Basin and, in particular, the migration of contaminated water through the Whittier Narrows into the Central Basin. The WQA currently operates groundwater cleanup projects for beneficial uses in the San Gabriel Valley that are actively intercepting contaminated groundwater flowing toward the Whittier narrows.

### Groundwater Management Area

**Raymond Basin Management Board (Raymond Basin).** The Raymond Basin represents the Groundwater Management Area on the LC. The Raymond Basin is the agency charged with administering adjudicated water rights within the watershed and managing groundwater resources in the Raymond Basin.

### Open Space Management Area

**Santa Monica Bay Restoration Commission (SMBRC).** The SMBRC represents the Habitat/Open Space Water Management Area on the LC. The State of California and the U.S. Environmental Protection Agency (USEPA) established the Santa Monica Bay Restoration Project as a National Estuary Program in December 1988. The Project was formed to develop a plan that would ensure the long-term health of the 266 square mile Santa Monica Bay and its 400 square mile watershed, located in the second most populous region in the United States. That plan, known as the Santa Monica Bay Restoration Plan, won state and federal approval in 1995. On January 1, 2003, the Santa Monica Bay Restoration Project formally

## IRWMP LEADERSHIP COMMITTEE

Leadership Committee members are actively engaged in monthly meetings. Membership includes director-level staff from a large number of local agencies. Subcommittees of the Leadership Committee include Legislative, Disadvantaged Community (DAC), Plan and Project Development, Water Supply, Water Quality, Habitat & Open Space and Climate Change.

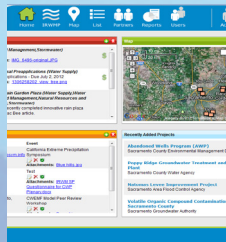


## MILESTONE ACCOMPLISHMENTS

Demonstrated cooperative efforts between Regional and Subregional groups:



Hold monthly meetings in each subregion to update plan objectives, comment on planning studies, review potential projects and collaborate on regional interests.



Provide administration and proponent support of newly developed project database that balances public access and program vetting for including projects in the IRWM Plan.



Support project development and integration through project presentation workshops



Conduct specialized outreach to encourage continued and increased participation from DAC and new participants.

Figure 1-3. Leadership and Subregional Steering Committees. The GLAC Region has an IRWM process that is developed regionally and implemented locally.



became an independent state organization and is now known as the Santa Monica Bay Restoration Commission. The SMBRC continues the mission of the Bay Restoration Project and the collaborative approach of the National Estuary Program but with a greater ability to accelerate the pace and effectiveness of Bay restoration efforts.

### Sanitation Management Area

**Sanitation Districts of Los Angeles County (LACSD).** The LACSD represents the Sanitation Water Management Area on the LC. The LACSD is a confederation of independent special districts serving about 5.4 million people in Los Angeles County. Its service area covers approximately 815 square miles and encompasses 78 cities and unincorporated territory within the County. LACSD constructs, operates, and maintains facilities to collect and treat approximately 430 million gallons per day (mgd) of municipal wastewater. Approximately 39 percent of the wastewater is reclaimed by LACSD, of which one half is beneficially reused. LACSD also provides the management of solid wastes including disposal, transfer operations, and materials recovery.

### Stormwater Management Area

**City of Los Angeles Bureau of Sanitation, Watershed Protection Division (WPD).** The WPD represents the Stormwater Water Management Area on the LC. The WPD, founded in 1990, is responsible for the development and implementation of stormwater pollution abatement projects within the City of Los Angeles, which covers approximately 23 percent of the Region.

### Surface Water Management Area

**Metropolitan Water District of Southern California (MWD).** MWD represents the Surface Water Management Area on the LC. MWD imports and distributes water from the State Water Project and Colorado River Aqueduct for 26 member agencies throughout Southern California (including those in the GLAC Region) and also develops other water resource and conservation projects throughout the state.

The composition of the LC achieves a cross sectional representation of all water management issues: Las Virgenes MWD, LADWP, West Basin MWD and MWD are involved in water supply, conservation and water recycling issues; the MSG and Raymond Basin Watermasters and the WQA are focused on groundwater supply and groundwater quality issues, respectively; LACFCD deals extensively with stormwater quality, flood protection, and the conservation of stormwater runoff; the cities of Los Angeles WPD, Torrance and Malibu provide the perspective of local cities on water issues; LACSD is the main agency for wastewater treatment, as well as a leader in water recycling; and the Council, WCA and SMBRC are proponents for open space, habitat and water quality issues. Collectively, the members of the Leadership Committee represent Regional leadership in all water management areas.

## Leadership Committee Subcommittees

In order to provide overall guidance during the Plan update process and other regional activities, the LC has created both standing and ad-hoc Subcommittees. The Subcommittees can be composed of LC or SC members as well as other stakeholders with expertise relevant to the Subcommittee goals. Current LC Subcommittees include those listed below:

**Legislative Committee** is a standing Subcommittee that tracks IRWMP-related legislation and performs as-needed outreach.

**Disadvantaged Community (DAC) Subcommittee** is a standing Subcommittee that provides direction and oversight to DAC outreach activities related to the IRWMP including the DAC Outreach Evaluation Program funded through Department of Water Resources (DWR).

**Plan & Projects Subcommittee** is an ad-hoc Subcommittee that provides direction on the project development and review process for the Plan and grant applications as well as preliminary review of draft Plan update chapters.

**Climate Change Subcommittee** is an ad-hoc Subcommittee that is composed of individuals involved with regional climate change activities

and planning efforts as well as stakeholders from each Subregion across all water management areas. Participants provide input and direction on the climate change component of the Plan update.

**Water Supply, Water Quality and Habitat & Open Space Subcommittees** are ad-hoc Subcommittees that provide technical input and document direction and review of all Plan Update related deliverables and content. These Subcommittees are composed of LC or other recommended members with water supply, water quality or habitat & open space expertise to help develop methodologies, provide recommendations to LC and review and resolve issues.

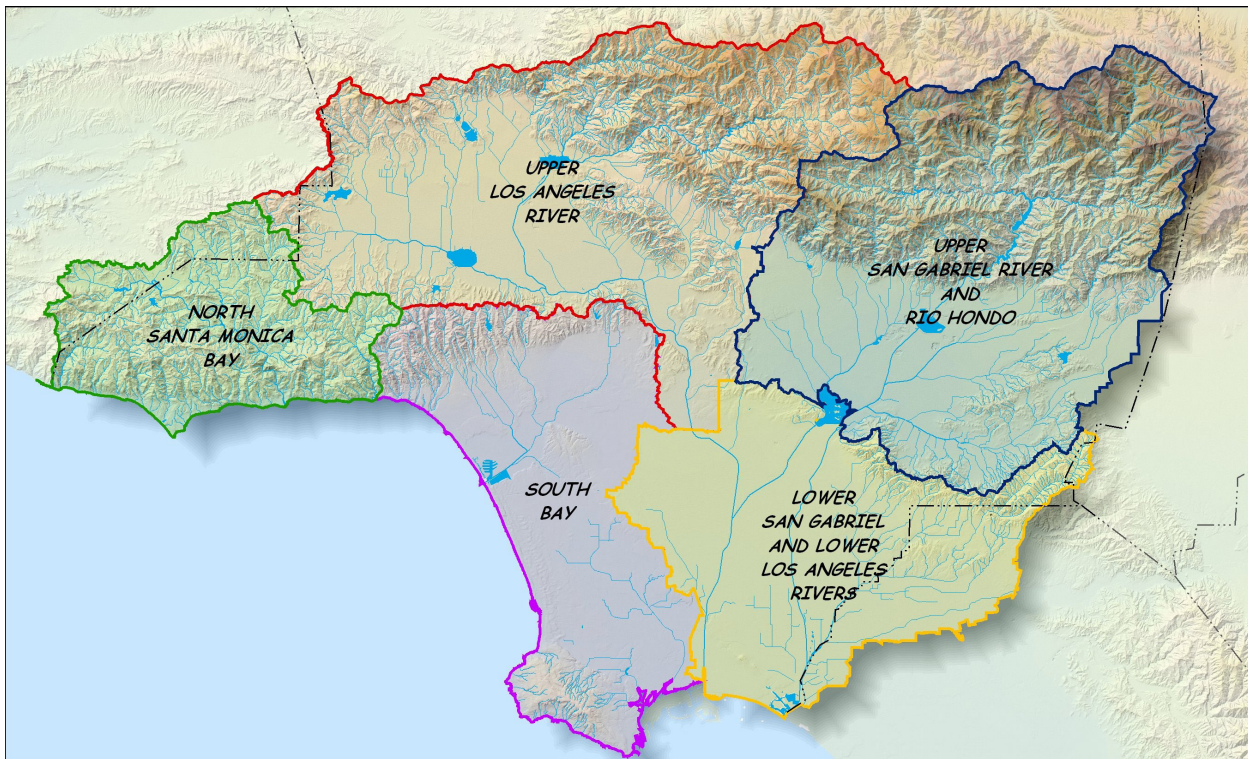
### Subregional Steering Committees

To better accommodate the multitude of GLAC stakeholders, the Region is divided into five geographically distinct Subregions (as seen in Map 1-2) with separate governing bodies called Steering Committees. Each of the SCs includes agency, city, non-governmental organizations and other stakeholder representatives from within the Subregion.

A current listing of each of the five Subregional SC members is shown in Table 1-1. The SCs operate according to the guidance provided in the Operating Guidelines but may also adopt additional rules for participation and formation.

The SCs meet monthly, or as-needed, within the Subregion to provide opportunities for direct input into the IRWMP process by stakeholders. The format and agendas of SC meetings are flexible to allow for collaboration and input on a variety of IRWM related topics and activities. Examples include workshops to discuss Plan Update topics and comment on drafts materials; presentation sessions for project proponents in advance of grant applications or to facilitate integration; formal voting sessions on governance; and information sharing on related regional planning efforts, funding opportunities, meetings and activities.

Each Subregion elects or re-elects a SC Chair and Vice-Chair as-needed. Stakeholders interested in joining a SC can submit a written request to the SC Chair for consideration by the SC. Membership is largely dependent upon the ability and interest of



Map 1-2. IRWMP Subregions, GLAC Region.

an entity to regularly participate in SC meetings. Regular participation by a consistent voting body is desired to ensure that an educated voting quorum is in attendance at each meeting. Although the SC membership are the only stakeholders that can vote on motions, any stakeholder attending SC meetings is able to participate in all other agenda items and discussions at the same level as Committee members.

Each SC also informally selects a Subregional administrator to manage the project database as well as posting of meeting agenda and minutes and other relevant announcements to the Region’s website (at [www.lawaterplan.org](http://www.lawaterplan.org)). This project process and database are discussed in greater detail in Chapter 5. Like the LC Meetings, SC meetings are open to the public through the posting of agendas and minutes on the Region’s website and also made available to those without computer access by contacting either the LC or SC Chairs.

## 1.5 Stakeholder Involvement

The relationship between the LC, its Subcommittees and the five SC’s relative to stakeholder involvement is shown in Figure 1-4.

### Regional Stakeholder and Public Outreach

The majority of stakeholder input to the IRWMP is conducted at the Subregional level which is then reported to the LC through the Subregional representatives during a standing LC meeting agenda items called “Subregional Reports.” Since Subregional SC meetings are held locally, they increase the ability and time allowed for individual stakeholder participation. All GLAC stakeholders and general public are also invited to attend the monthly LC meetings and can speak during the public comment period.

As the Chair of the LC, the LACFCD maintains the LC and overall GLAC Region distribution list. Any interested party can be added to the distribution list by contacting LACFCD staff as indicated on agendas and minutes or through the SC Chairs. The LC distribution list receives notification and agendas/hand-outs of upcoming LC meetings, minutes from previous meetings, relevant

announcements and requests for information or input. While distribution to the list is primarily done via email, stakeholders and interested parties can request that materials be distributed in other formats to accommodate their needs. IRWM Plan information is also posted on the GLAC website at [www.lawaterplan.org](http://www.lawaterplan.org).

Subregional SCs maintain individual subregional interested party and stakeholder lists. SC Chairs use these lists to disseminate information on upcoming SC meetings, project proponent announcements (such as call for projects) and to forward relevant LC items as well. While distribution to the list is primarily done via email, stakeholders and interested parties can request that materials be distributed in other formats to accommodate their needs by contacting the either SC or LC Chair listed on the GLAC Website. IRWMP information is also posted on the GLAC website and project database accessible at [www.lawaterplan.org](http://www.lawaterplan.org).

Various stakeholder groups (e.g., the Ballona Creek Watershed Task Force and regional Councils of Government (COGs)) forward IRWMP messages to their constituencies, thereby extending the reach to additional stakeholders. Initially, written communications in the form of letters to cities and press releases to the media were utilized to expand awareness of, and participation in, the IRWMP.

With this structure, and under the guidance of the SCs, stakeholders are provided an opportunity to participate in the IRWM process including activities specific to the Plan Update such as creating subregional objectives and targets, developing and reviewing projects and updating both the regional and subregional descriptions. Section 1.7 describes the Plan Update process in greater detail.

Both the LC and SC distribution lists are updated regularly to ensure that all interested parties and stakeholders will receive notifications on current and upcoming IRWM activities and information. Each Subregion reviews these distribution lists and meeting attendance records to identify any participation gaps and how further outreach can be done. Current distribution lists may include hundreds of cities, agencies, districts, and organizations.

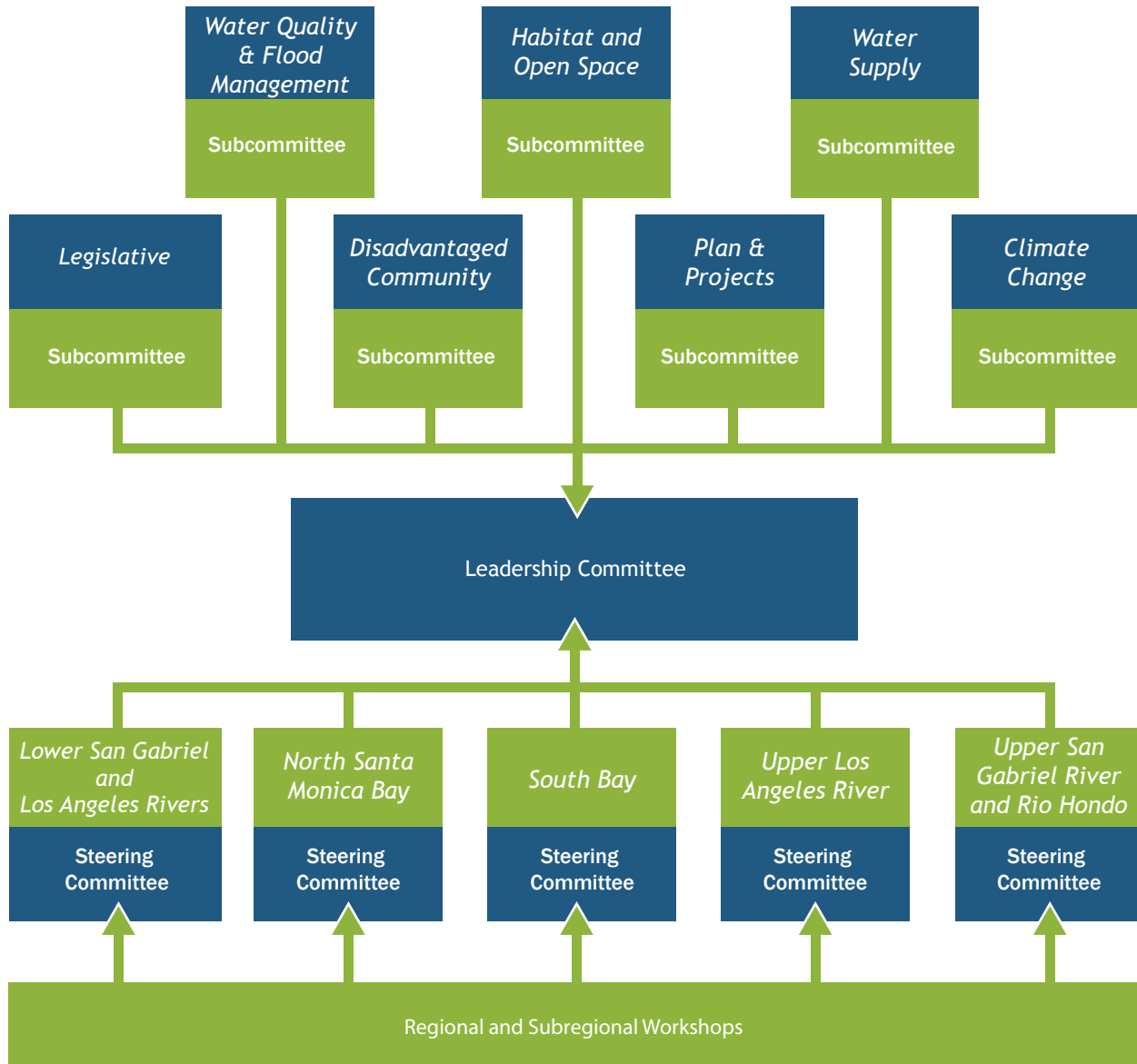


Figure 1-4. Stakeholder Participation in GLAC Governance Structure

**Federal Agencies.** Army Corps of Engineers, Bureau of Reclamation, Forest Service, National Park Service, Natural Resources Conservation Service.

**State Departments and Agencies.** Caltrans, Parks and Recreation, Water Resources Control Board, Regional Water Quality Control Boards, University of California, California State University, Water Resources.

**State Conservancies.** San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, Santa Monica Mountains Conservancy, Coastal Conservancy.

**Special Districts.** County Sanitation Districts of Los Angeles County, Los Angeles County Flood Control District and Resource Conservation District of the Santa Monica Mountains.

**Los Angeles County Departments.** Public Works, Parks and Recreation, Regional Planning, Fire and Beaches and Harbors.

**Cities in Los Angeles County.** Agoura Hills, Alhambra, Arcadia, Artesia, Azusa, Baldwin Park, Bell, Bellflower, Bell Gardens, Beverly Hills, Bradbury, Burbank, Calabasas, Carson, Cerritos, Claremont, Commerce, Compton, Covina, Cudahy, Culver City, Diamond Bar, Downey, Duarte, El Monte, El Segundo, Gardena, Glendale, Glendora, Hawaiian Gardens, Hawthorne, Hermosa Beach, Huntington Park, Industry, Inglewood, La Cañada Flintridge, La Habra Heights, Lakewood, La Mirada, La Puente, La Verne, Lawndale, Long Beach, Los Angeles, Lomita, Lynwood, Malibu, Manhattan Beach, Maywood, Monrovia, Montebello, Monterey Park, Norwalk, Palos Verdes Estates, Paramount, Pasadena, Pico Rivera, Pomona, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Rosemead, San Dimas, San Fernando, San Gabriel, San Marino, Santa Fe Springs, Santa Monica, Sierra Madre, Signal Hill, South El Monte, South Gate, South Pasadena, Temple City, Torrance, Vernon, Walnut, West Covina, West Hollywood, Westlake Village, and Whittier.

**Other Entities.** County of Orange and individual cities within Orange County; COGs; non-profit organizations (trusts, foundations, conservancies, associations, societies, coalitions, alliances, councils); joint powers authorities, businesses, property owners; financial institutions; businesses and industry associations; Chambers of Commerce; educational institutions; civic organizations; environmental groups; environmental justice organizations; watershed councils; homeowner associations, and interested individuals.

**Water Agencies and Districts.** All major water wholesalers and regional water agencies have been invited to participate in the IRWMP process, as listed in Table 1-2. Because each of the Region's water districts, wholesalers and authorities are participants in the IRWMP process, the cities served by these water supply agencies are indirectly represented. With this participation, all entities that are party to groundwater basin adjudications in the Region are also represented. In addition, the Upper Los Angeles River Area Watermaster and the Main San Gabriel Basin and Raymond Basin Watermaster are participants in the process.



Figure 1-5. Opportunities for Stakeholders and Agencies. Subregional and Regional workshops have provided opportunities for project collaboration and integration.

Table 1-1. Subregional Steering Committee Members

Lower San Gabriel and Los Angeles Rivers	North Santa Monica Bay	South Bay	Upper Los Angeles River	Upper San Gabriel and Rio Hondo Rivers
<ul style="list-style-type: none"> <li>California Coastal Conservancy</li> <li>Central Basin Municipal Water District</li> <li>Council for Watershed Health</li> <li>Los Angeles County Department of Public Works</li> <li>Orange County Resources and Development Management Department</li> <li>County Sanitation Districts of Los Angeles County</li> <li>Water Replenishment District</li> <li>Watershed Conservation Authority</li> </ul>	<ul style="list-style-type: none"> <li>California Department of Transportation</li> <li>City of Agoura Hills</li> <li>City of Calabasas</li> <li>City of Malibu</li> <li>City of Westlake Village</li> <li>Los Angeles County Flood Control District</li> <li>Las Virgenes Municipal Water District</li> <li>Los Angeles County Board of Supervisors, 3rd District</li> <li>Malibu Lake Mountain Club</li> <li>Mountains Restoration Trust</li> <li>Resource Conservation District of the Santa Monica Mountains</li> <li>Water District # 29 Los Angeles County Department of Public Works</li> <li>West Basin Municipal Water District</li> <li>Westlake Lake Management Association</li> </ul> <p><b>Non-Voting Members</b></p> <ul style="list-style-type: none"> <li>California Department of Parks and Recreation</li> <li>Los Angeles County Beaches &amp; Harbors</li> <li>Los Angeles County Regional Planning</li> <li>National Park Service-Santa Monica Mountains NRA</li> <li>Santa Monica Bay Restoration Commission</li> <li>Santa Monica Baykeeper</li> <li>Santa Monica Mountains Conservancy</li> <li>Triunfo Sanitation District</li> </ul>	<ul style="list-style-type: none"> <li>City of Los Angeles Bureau of Sanitation</li> <li>City of Torrance</li> <li>Heal the Bay</li> <li>Los Angeles County Flood Control District</li> <li>Los Angeles Department of Water and Power</li> <li>County Sanitation Districts of Los Angeles County</li> <li>Santa Monica Bay Restoration Commission</li> <li>South Bay Cities COG</li> <li>Water Replenishment District</li> <li>West Basin Municipal Water District</li> <li>Westside Cities COG</li> </ul> <p><b>Non-Voting Members</b></p> <ul style="list-style-type: none"> <li>Los Angeles County Beaches and Harbors</li> <li>Los Angeles Regional Water Quality Control Board</li> </ul>	<ul style="list-style-type: none"> <li>Arroyo Seco Foundation</li> <li>Burbank Water and Power</li> <li>City of Calabasas</li> <li>City of Los Angeles Department of Water and Power</li> <li>City of Los Angeles Department of Recreation &amp; Parks</li> <li>City of Los Angeles Department of Public Works, Bureau of Sanitation</li> <li>City of Pasadena</li> <li>City of South Pasadena</li> <li>Council District 9</li> <li>Council for Watershed Health</li> <li>Foothill Municipal Water District</li> <li>Glendale Water and Power</li> <li>Los Angeles County Flood Control District</li> <li>Mountains Recreation and Conservation Authority</li> <li>Tree People</li> <li>Tujunga Watershed Area</li> </ul>	<ul style="list-style-type: none"> <li>City of La Verne</li> <li>City of Monrovia</li> <li>City of Arcadia</li> <li>Council for Watershed Health</li> <li>County Sanitation Districts of Los Angeles County</li> <li>Los Angeles County Flood Control District</li> <li>Main San Gabriel Basin Watermaster</li> <li>Raymond Basin Management Board</li> <li>Rivers and Mountains Conservancy</li> <li>San Gabriel Basin Water Quality Authority</li> <li>San Gabriel Mountains Regional Conservancy</li> <li>San Gabriel Valley Municipal Water District</li> <li>San Gabriel Valley Water Association</li> <li>Three Valleys Municipal Water District</li> <li>Upper San Gabriel Valley Municipal Water District</li> </ul> <p><b>Non-Voting Members</b></p> <ul style="list-style-type: none"> <li>California Department of Water Resources</li> <li>Los Angeles County Department of Public Works</li> </ul>

Table 1-2. Water Districts, Agencies, and Authorities in Greater Los Angeles IRWMP Region

Regional District or Authority	GLAC Region Cities and Communities Served
<b>Central Basin MWD*</b>	Artesia, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Cudahy, Downey, East Los Angeles, Florence, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, South Whittier, Vernon, Whittier
<b>Foothill MWD*</b>	Altadena, La Cañada Flintridge, La Crescenta, Montrose
<b>Las Virgenes MWD*</b>	Agoura Hills, Calabasas, Chatsworth, Lake Manor, Hidden Hills, Malibu Lake, Monte Nido, Westlake Village, West Hills
<b>Metropolitan Water District of Southern California</b>	Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Los Angeles, Pasadena, San Fernando, San Marino, Santa Ana, Santa Monica, Torrance
<b>Municipal Water District of Orange County*</b>	Brea, Buena Park, Cypress, La Habra, La Palma, Los Alamitos, Placentia, Seal Beach
<b>San Gabriel Basin Water Quality Authority</b>	Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Covina, Duarte, El Monte, Glendora, Industry, Irwindale, La Puente, La Verne, Monrovia, Monterey Park, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, West Covina, Whittier
<b>San Gabriel Valley MWD</b>	Alhambra, Azusa, Monterey Park, Sierra Madre
<b>Southeast Water Coalition Joint Powers Authority</b>	Cerritos, Commerce, Downey, Huntington Park, Lakewood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, South Gate, Vernon, Whittier
<b>Three Valleys MWD*</b>	Azusa, Charter Oak, Claremont, Covina, Covina Knolls, Diamond Bar, Glendora, Industry, La Verne, Pomona, Rowland Heights, San Dimas, South San Jose Hills, Walnut, West Covina
<b>Upper San Gabriel Valley MWD*</b>	Avocado Heights, Arcadia, Baldwin Park, Bradbury, Citrus, Covina, Duarte, El Monte, Glendora, Hacienda Heights, Industry, Irwindale, La Puente, Mayflower Village, Monrovia, Rosemead, San Gabriel, South El Monte, South Pasadena, South San Gabriel, Temple City, Valinda, West Covina, West Puente Valley
<b>Water Replenishment District of Southern California</b>	Artesia, Bell, Bellflower, Bell Gardens, Carson, Cerritos, City of Commerce, Compton, Cudahy, Downey, El Segundo, Gardena, Hawaiian Gardens, Hawthorne, Hermosa Beach, Huntington Park, Inglewood, La Habra Heights, La Mirada, Lakewood, Lawndale, Lomita, Long Beach, Los Angeles, Lynwood, Manhattan Beach, Maywood, Montebello, Monterey Park, Norwalk, Palos Verdes Estates, Paramount, Pico Rivera, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Fe Springs, Signal Hill, South Gate, Torrance, Vernon, Whittier
<b>West Basin MWD*</b>	Alondra Park, Carson, Culver City, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Ladera Heights, Lawndale, Lennox, Lomita, Malibu, Manhattan Beach, Marina Del Rey, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Ross- Sexton, Topanga Canyon, Torrance, West Athens, West Hollywood

\*Also served by the Metropolitan Water District of Southern California

Sources: Metropolitan Water District of Southern California, San Gabriel Valley MWD, San Gabriel Basin Water Quality Authority, Southeast Water Coalition, and Water Replenishment District of Southern California

## Program Website and Project Database

The GLAC Region maintains a website at [www.lawaterplan.org](http://www.lawaterplan.org) to facilitate the accessibility of IRWMP information to stakeholders. The website provides overall program information and all public documents produced by the Region including the Plan and Plan Update, reports and Technical Memoranda (TM), grant applications, DWR notifications, and meeting agendas and minutes.

The newly developed GLAC IRWM project database has a web access user interface that is linked to the GLAC website as a means to provide a more dynamic and interactive interface for posting current and temporal information regarding upcoming meetings, announcements and is the main tool used for documenting and viewing both conceptual and IRWM projects and information. Figure 1-6 shows the project database user interface.

The project database is accessible at all times to anyone that registers with a name and password as a user. The project database has a straightforward and easy web-based user interface and allows users to:

- View LC and SC meeting agendas and minutes
- See recent announcements including links to documents available for review
- Upload and modify project information for review by SCs
- View maps with locations of current conceptual and approved IRWM projects
- View conceptual and approved IRWM Project lists and details

The SCs are the main bodies responsible for the outreach necessary to implement the project development and review process described in Chapter 6. The Chairs and administrators of each SC serve as the primary contacts for project proponents to receive information and provide support for project uploading and during project review. This often requires individual user emails or phone calls to facilitate successful participation by those with or without computer access.

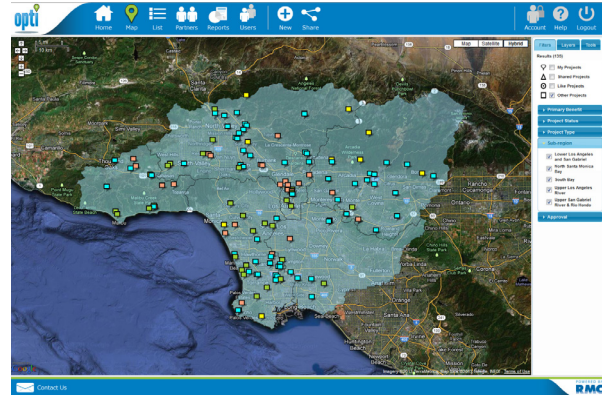


Figure 1-6: Project database: The GLAC project database provides stakeholders through the Region equal and immediate access to project and program information including the results of the project review process and integration opportunities.

## Disadvantaged Community Outreach

The 2006 IRWM Plan focused efforts to identify and encourage participation from members of disadvantaged communities (DAC)s and other stakeholders. That effort mapped DACs in each Subregion and generated meetings, individual phone conversations, and presentations with local community coalitions connected to DAC representative groups (such as the Environmental Justice Coalition for Water, the Los Angeles Working Group on the Environment, and the Los Angeles Department of Neighborhood Empowerment).

In 2008, the Region prepared an interim DAC Outreach Plan that identified a basic (Subregion-focused) process for conducting DAC outreach. At the direction of the LC and with direct input by the five subregional steering committees, a DAC Subcommittee was formed to oversee and review the creation of the DAC Outreach Plan. Outreach was defined as a meaningful exchange between project initiators, project implementers and members of DAC. The DAC Subcommittee recommended approval of the interim Outreach Plan recognizing that a significant information gap remained about the needs of DAC relative to the IRWMP. As the Outreach Plan was being implemented, it became clear that given the geographic size and large population within each Subregion and the Region as a whole, identifying representatives that could speak to the issues faced by members of DAC relative to water management was incredibly challenging.



The DAC Subcommittee facilitated and supported several efforts to help meet these challenges. These efforts are described below.

### DAC Coordinator

The GLAC IRWM DAC Coordinator position was developed in order to ensure that outreach to disadvantaged communities was given priority status by the GLAC Region. These efforts have included the creation and coordination of an outreach process that produces authentic engagement of the disadvantaged communities in the water resources planning efforts by the region. The DAC Coordinator is charged with creating increased access to the resources and funding available for multi-benefit projects that help improve the quality of life for the residents in the Region's disadvantaged communities. The Coordinator also helps engage members of disadvantaged communities to provide input into the project development process to produce sound IRWM projects that meet priority needs in their communities.

An important role for the GLAC Region DAC Coordinator is to serve as a liaison between public agencies participating in the IRWM activities (e.g. on the Steering Committees and Leadership Committee), not-for-profit organizations and the residents of disadvantaged communities. The DAC Coordinator also works closely with project proponents to assist with project development so that residents of the disadvantaged communities can be beneficiaries of the IRWM funding especially designated for these communities. The DAC Coordinator gathers and analyzes information that is put forth by DWR to ensure that the agency's guidelines are adhered to with regard to disadvantaged communities.

The DAC Coordinator also monitors and collaborates on efforts between the various stakeholders throughout the GLAC Region who conduct outreach in disadvantaged communities. The DAC Coordinator has also participated in outreach efforts conducted by the Council for Watershed Health, as well as Alcanza outreach efforts, as described further below.

In order to promote stakeholder participation, the DAC Coordinator also coordinates monthly meet-

ings with stakeholders regarding disadvantaged community issues in the GLAC Region. These stakeholders include a variety of community and non-profit organizations, and public agencies that participate in IRWMP activities.

The DAC Coordinator also collaborates with contractors and consultants to ensure consistency in the various planning efforts and to ensure that the regional objectives are met. This is accomplished through the coordination of site visits with project proponents to ensure that benefits to disadvantaged communities are delivered in each of the Region's projects identified as having a potential to benefit DACs.

The GLAC IRWMP recognizes that as the IRWM Region with the largest population, it would be helpful to develop policy proposals to ensure that the urban disadvantaged communities in the GLAC Region are better served. The DAC Coordinator and Subcommittee are working with the LC to identify policy changes that would be beneficial for the Region. This effort ensures that the GLAC Region places a priority emphasis on participation by, and delivering benefits to, DACs.

### DAC Outreach Evaluation Program

It was the GLAC Region's understanding that in order to conduct effective outreach to DACs and receive meaningful input for the IRWM process, a more robust and rigorous outreach process should be developed and tested. As a result, the GLAC Region applied for and received specialized funding from the Army Corps of Engineers Technical Assistance to the States Program and DWR to develop a draft outreach process and to implement the process as a pilot program that could then be used to revise the engagement process based on lessons learned. Funding of the GLAC DAC Outreach Evaluation Program (Outreach Program) also allowed for implementation of this revised process in five other pilot DAC areas. The results of this project will be fully described in a report titled "Disadvantaged Community Outreach Evaluation Study Report" which will be finalized in late 2013 (Council for Watershed Health, 2013).

The Outreach Program, implemented by the Council for Watershed Health, sought to under-

stand what types of changes should be made in traditional methods of outreach to produce more effective engagement with members of DACs. Beyond performing outreach and technical assistance to develop project concepts, the Outreach Program sought to develop a more robust technique for identifying the challenges faced by DACs in the Region, and to produce a framework for facilitating engagement with existing community networks.

Because California statutes describe DACs with a single-indicator (median household income), and because median household income is data reported by the US Census, DACs are traditionally identified using US Census unit boundaries. However, these boundaries often fail to properly encompass communities in the dense urban spaces of the GLAC IRWM Region. To overcome this challenge, researchers and local experts sought to better describe DAC boundaries throughout the GLAC Region. This effort included desktop mapping to identify distinct clusters of DAC census units and field visits and conversations with members of the communities in question to verify and define DAC regions based on community members' sense of affiliations. Properly understanding the extent of each community, from the perspective of the community members, is a critical first step for engaging with that community.

After the community boundaries were identified, the Outreach Program team hired firms or individuals with experience performing outreach and engaging with particular communities. Using this type of expertise is critical in identifying with whom and where in the community the engagement process should focus. These local experts were also able to customize engagement approaches to the community where they worked, providing the program a wide variety of outreach techniques from which to draw conclusions and develop ideas for future efforts in the Region.

Lastly, a broad and open-ended engagement effort was pursued. By expressing IRWM in general terms, the community was free to describe their most significant needs without feeling constrained, or overwhelmed, with the complexity of the water management system. The Outreach Program team then worked to link the needs expressed by

the community with appropriate IRWM capacity, and engaged proper technical or administrative resources to develop project concepts and identify project proponents

Five communities were selected by the Outreach Program team, in consultation with the DAC Coordinator and DAC Subcommittee, in which to perform and analyze outreach efforts:

- City of Maywood
- Northeast Gardena/North Harbor Gateway
- Northern North Hollywood
- Portions of El Monte and South El Monte
- Eastside neighborhood of Central Long Beach

Using technical consultants supported by DWR and the US Army Corps of Engineers Technical Assistance to the States funding, five project concepts, situated in the outreach communities, were produced, four of which were identified for consideration during the Region's November 2012 Proposition 84 Round 2 Implementation Grant Application project selection process.

The conclusion of the Outreach Program includes three engagement models, described for use to improve the interaction of IRWM efforts and members of DAC:

**1 – Notification:** This model is the most commonly practiced. In this model, an agency or institution has a project that is funded and moving forward. The community is notified of the project, and comments are sought.

**2 – Outreach Engagement:** This model represents the activity of the DAC Coordinator, the Outreach Evaluation Study, and the Alcanza project (below). In this model, the institutions or agencies use outreach or engagement specialists to work with communities to identify projects that are needed. The institutions and agencies initiate this activity, and use their capacity to solve problems or pursue project that result.

**3 – Community-led Engagement:** This model represents when a non-technical “grass-roots” effort approaches institutions or agencies for help with a problem or a project concept. In this case, members of a DAC initiate the engagement. This

model is not common in the GLAC Region. Under this model, institutions and agencies are encouraged to become more accessible to community members, for instance by appointing and publicizing dedicated staff contacts, providing guidance materials, implementing a social media or online presence, or conducting listening sessions.

These efforts identified priority DAC needs in these pilot communities such as additional local parks and open space, urban greening for storm-water management and climate change adaptation, flood risk management, and replacement of aging water infrastructure.

No one of these engagement models is necessarily superior to the others, and in many cases some combination will likely result from engagement activities. For the GLAC-IRWM Region, with a large and dense population it is vital that agencies and institutions consider how to engage DACs with techniques described in each of these models.

A final Report regarding this project is expected to be completed in late 2013, and will be available on the GLAC Region's website ([www.lawaterplan.org](http://www.lawaterplan.org)).

Outreach efforts will continue in the disadvantaged communities to support and build on the projects and programs that have been developed through these aforementioned efforts. The extensive work that has been completed in planning is the first step to prepare the disadvantaged communities in the GLAC Region to compete for future IRWMP funding to address their water supply, water quality and habitat and open space needs.

### Alcanza Outreach Project

There are over 60 identified DACs within the Region. One goal of the DAC Subcommittee is to improve the potential for DACs to receive implementation funding for their projects. As the Chair of the DAC Subcommittee, the Rivers and Mountains Conservancy has been working with community organizations to improve that potential through increased involvement and support. In 2011, the Rivers and Mountains Conservancy authorized grant for the Alcanza Project. The Alcanza Project is focused on enhancing the ability for DACs to develop and submit projects into the

IRWM Program. The communities of Compton and Lynwood were selected as two DACs with significant and critical water needs that could benefit from the Alcanza Project.

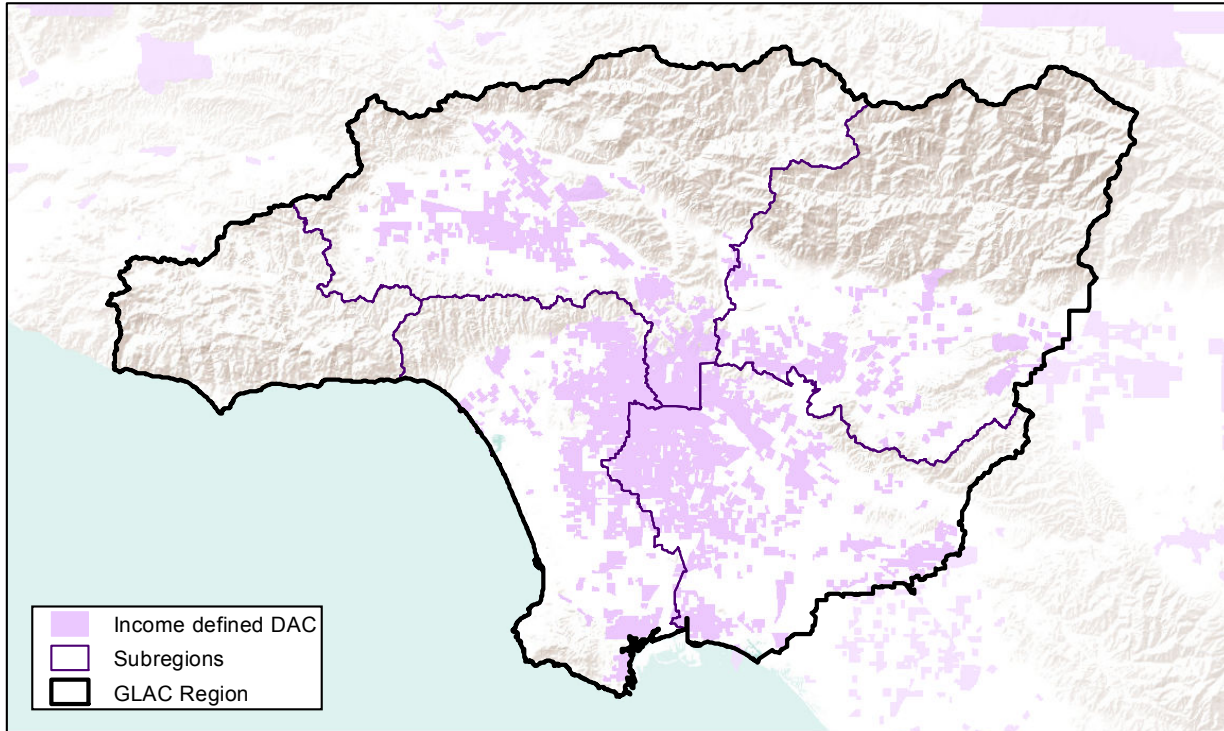
Local community groups within Compton and Lynwood were identified and partnerships formed between those with project ideas and those that could provide technical support to develop project concepts. The Alcanza Project generated two project concepts that have been further developed and introduced into the IRWM process. Aside from the IRWM projects developed, the Alcanza Project improved the knowledge and education for community members participating in this process. Alcanza found that these community members retained the principles of water education obtained and were highly satisfied with the planning process. The results of this outreach process will lay out recommendations for future engagement of disadvantaged communities in the IRWM planning process, particularly in these kinds of urban communities within the GLAC Region.

Beyond these specific disadvantaged community outreach and involvement efforts, many entities that represent or provide benefits to disadvantaged communities attend and participate in the LC, DAC Subcommittee and SC meetings. This attendance is encouraged through regular emails from the IRWM Program Administrator (LACFCD), the DAC Coordinator and SC Chairs announcing meetings and other IRWM announcements to their distribution lists. These distribution lists are reviewed by the SCs to look for participation gaps based upon an ever increasing understanding of both DAC and other potential stakeholders in the GLAC Region. Action items to address those gaps may be identified and assigned as appropriate to SC members or other meeting stakeholders.

DAC areas within each GLAC Subregions are identified in the maps provided as part of Chapter 2 of this Plan update. Map 1-3 provides the DACs throughout the region.

### Tribal Outreach

A specialized task was conducted as part of the Plan Update to determine tribal stakeholders and interests in the Region and then conduct outreach



Map 1-3: Disadvantaged communities in the GLAC region.

to these interests in an effort to encourage participation in ongoing IRWM activities including the Plan Update.

The GLAC Region contacted the Native American Heritage Commission (NAHC) to determine if the Region was home to any federally-recognized tribes or tribal interests. The response from the NAHC indicated that the Region is not home to any current tribes or tribal lands but provided the contact name and information of several individuals listed as having tribal interests that reside within the GLAC Region. A letter was sent by the LC to each of the individuals on the listing to explain the IRWM Plan Update process, provide contact and Website information and encourage participation.

### Local Planning Outreach

The stakeholder process allows for interactive feedback to occur between local planning and regional IRWM planning. Local planning is conducted by counties, cities, and local agencies and districts.

Many of the water agencies, and most of the cities in the Region have participated in the IRWM process. Through the stakeholder workshops, the

water agencies, cities, COGs and municipal agencies have had the opportunity to participate and advocate for their respective local planning needs and issues, which in many cases have been incorporated into the IRWM.

Subsequently, the outcomes from the IRWM planning process have been disseminated by the representatives back to their local governments and planning agencies, allowing the IRWM priorities and plans to be considered in local planning where appropriate. In addition, water agencies can factor IRWM programs and priorities into their individual plans. As future updates of the IRWM occur, local entities that use that update to further refine or adapt these local plans.

### Outreach to other IRWM Regions

The GLAC Region is part of DWR’s IRWM Los Angeles Funding Area. Other Los Angeles Funding Area Regions include Watershed Coalition of Ventura County, Upper Santa Clara River and Los Angeles Gateway Water Management Authority. Although not in the same Funding Area as the GLAC Region, the Santa Ana Watershed Project Authority and Antelope Valley regions are adjacent

## LOCAL PLANNING



Figure 1-7. Pacoima Spreading Grounds, Tujunga Watershed. Local planning efforts like the Tujunga Watershed Project illustrates the importance of local planning in meeting regional IRWMP goals.

to GLAC. Outreach and communication takes place between the GLAC and these overlapping and adjacent IRWM regions through shared stakeholders and planning and project interests. This outreach and communication is generally conducted through the appropriate Subregional SC or LC.

**Watersheds Coalition of Ventura County Region (WCVC).** A portion of GLAC’s North SM Bay Subregion is within Ventura County. Therefore, WCVC representatives are on North SM Bay and LC distribution lists and have attended North SM Bay SC meetings to share project information, look for intra-regional integration opportunities and learn about the GLAC Plan Update. North SM Bay Committee members are also on the VC Region distribution lists and have attended meetings.

**Santa Ana Watershed Project Authority Region (SAWPA).** A portion of the SAWPA Region overlaps GLAC’s Lower SG & LA Subregion. Overlapping stakeholders are on the Lower SG & LA and LC distribution list and are encouraged to and have attended meetings.

**Los Angeles Gateway Region IRWMP JPA (Gateway Region).** The GLAC IRWM Region boundary wholly contains the Gateway Region. During the IRWM Program Regional Acceptance Process (RAP), no changes to the GLAC IRWM



Torrance Detention Basin. Enhancement of detention basins in the Dominguez Channel watershed could improve water quality, create habitat, and provide passive recreation opportunities.



Compton Creek. Restoration of the natural bottom section of Compton Creek could improve water quality, facilitate recharge, and restore habitat.

Region boundaries were suggested by DWR. Given the physical connection between the Gateway and the GLAC regions, DWR maintains that in order to effectively plan and address regional concerns, such as stormwater management, wastewater treatment and recycling, and aging infrastructure, cooperation between the GLAC and Gateway regions is imperative. In keeping with DWR's directive, the GLAC Region is fostering collaboration with Gateway Region. GLAC includes Gateway in correspondence to stakeholders and attends Gateway meetings to provide updates on GLAC activities and areas of focus.

**Antelope Valley (AV) and Upper Santa Clara River (USCR) Regions.** These regions are both within Los Angeles County, however, there is no overlapping area with the GLAC region. Both the AV and USCR regions are adjacent to the north of the GLAC's Upper LA and Upper SG & RH Subregions. All three of these regions share the County of Los Angeles as a major stakeholder and member of their respective RWMGs. Therefore collaboration is facilitated through LA County's consistent participation.

Chapter 2 Regional Description provides both maps and other information regarding synergies between GLAC and its neighboring regions.

## 1.6 2006 Plan Development

In response to the release of DWR's 2004 IRWM Grant Program Guidelines, six regional groups within Los Angeles County submitted grant applications (in May 2005) to support development of an IRWMP, including the Santa Monica Bay Restoration Commission, the City of Los Angeles, the Watershed Conservation Authority, the Upper San Gabriel Municipal Water District, the West Basin MWD, and the City of Downey. Although DWR initially recommended funding only one application, DWR ultimately expanded the funding pool and proposed a single planning grant of \$1.5 million, on the condition that the six original applicants prepare a single plan for the Region.

In December 2005, the six regional groups consolidated efforts and developed a single plan. This Plan was adopted by the Region in December 2006

and served as the basis for the Region's successful Prop 50 and Prop 84, Round 1 implementation grant applications which awarded the GLAC Region two grants totaling \$50.6 Million for IRWM project implementation.

## 1.7 2013 Plan Update Process

As mentioned above, in July 2012, the GLAC Region received a DWR Proposition 84 (Prop 84) Round 1 Planning Grant to update the 2006 Plan. In accordance with Section 6066 of the government Code, a public notice of intent to update the Plan was published in May 2013 (Appendix C).

This resulting 2013 GLAC IRWM Plan Update was prepared in keeping with requirements of DWR's Planning Grant Award and November 2012 IRWM Prop 84 and 1E Program Guidelines. This 2013 Plan Update documents the current IRWM Program and processes that have evolved over the past six years since the initial 2006 Plan was developed.

The specific activities necessary to update the 2006 Plan began in August 2012 and were completed in July 2013. The plan update process used the existing IRWM Program governance, outreach and coordination standards and practices described in this Chapter 1 to generate the stakeholder input and review necessary to meet DWR and GLAC Region IRWM Plan Update requirements.

Since the Plan update required input on many topics with varying stakeholders, several individual draft Water Management Target Technical Memoranda (TMs) and Subregional Plans were produced in advance of drafting Plan updates. These documents were developed from initial input provided during workshop style discussions held during special ad-hoc committee meetings, as well as during regularly scheduled Subregional SC and LC Subcommittee meetings and then distributed for review as shown in Figure 1-8. The majority of comments received were able to be addressed at the subregional level, however any conflicting comments or more regional issues were resolved during LC meetings.

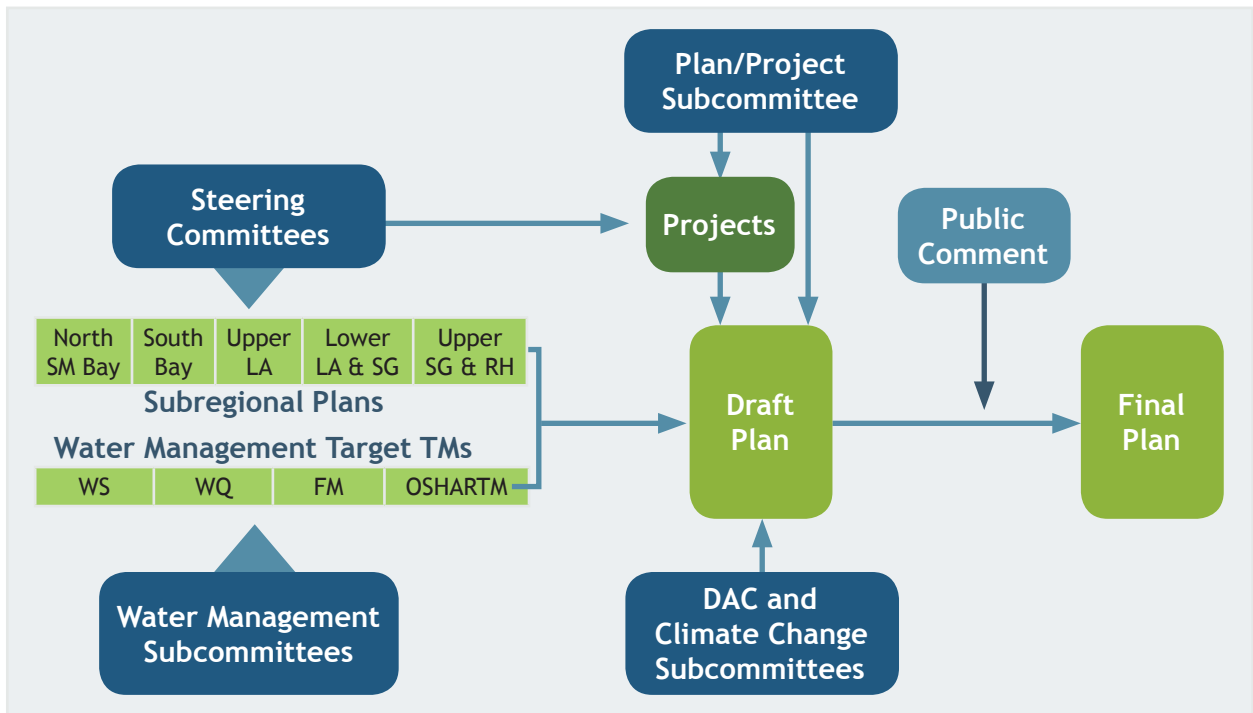


Figure 1-8: 2013 Plan Update Deliverables and Development Process

## Water Management Target TMs

Objectives and targets were identified as one of the main updates to be completed for the 2013 Plan. The Region wanted to improve upon the existing regional targets by creating subregional targets, where possible, for some planning objectives areas that could then be combined to reflect the regional objectives. In order to provide some consistency between Subregions on the style, format and method for generating targets, ad hoc subcommittees of the LC were formed in order to determine methods and format that could be used by SCs to develop numeric targets and then to review and approve the resulting regional “rolled up” objectives and targets. These subcommittees included representatives from the Subregions with the particular expertise needed. The result of these subcommittee efforts were the following TMs:

- Water Supply Targets (Appendix E)
- Water Quality Targets (Appendix F)
- Flood Management Targets (Appendix G)
- Open Space, Habitat and Recreation (Appendix H)

The objectives and targets developed for these TMs were based upon the data and information found in recent and/or relevant local and regional existing

planning documents. These documents (cited in the TMs) were used to benefit and build upon previous work done within the Region as well as to enhance consistency in regional planning efforts.

Participants in these subcommittees provided the input to assure that the IRWM objectives are congruent with local planning and that the Plan includes current, relevant elements of local water planning and water management strategies and issues common to multiple local entities in the Region. These topics included groundwater management, urban water management, water supply assessments and other resource management planning such as flood protection and watershed management. Because of the size and complexity of the GLAC Region, modifications to objectives based on changing urban water management plans and other local and regional plans must be handled through updates to the IRWM Plan. On the other hand, the IRWM Plan will be fed back to local planning efforts through wide spread dissemination of the Plan and by the requirement that the Plan be adopted by agencies proposing projects included in a grant application. If inconsistencies between local and regional plans are identified in the future, the LC will work with agencies to identify the differences and address them in a future Plan Update.

These TMs also were reviewed by subregional stakeholders to prepare the targets included in each of the Subregional Plans described below. The actual revised objectives and the process used to update them are described in greater detail in Chapter 3.

It is important to note that, with the encouragement of members of the LC, significant progress was made on integrating stormwater quality management and water supply strategies with land use planning in the adoption of the November 2012 Municipal Separate Storm Sewer System (MS4) Permit by the LA Regional Water Quality Control Board (RWQCB). For the first time, incentives were included in the permit to encourage the development of “enhanced” watershed management plans which, in turn, encourage projects with multiple benefits to be developed by municipalities within a watershed. It should be further noted that municipal stormwater managers and water managers work closely with their planning departments in the review of development proposals.

The Region determined that a much more robust planning effort was needed to develop similar objectives and targets for open space, habitat and recreational goals. The resulting Open Space, Habitat and Recreation TM (OSHARTM) was developed to define open space, habitat and recreation needs within the Region that could be met through the implementation of integrated water management planning and projects. This TM was developed under the direction of the Habitat and Open Space (HOSP) Subcommittee and reviewed by subregional stakeholders. The HOSP Subcommittee began meeting in September of 2011 to discuss an approach to target setting for habitat and open space in the Region. Meetings continued through December 2011 when the Subcommittee finalized targets. A report was drafted in April 2012 and the Subcommittee provided comments on two drafts through June 2012. The report was then presented to Subregions and presentations were given to each Subregion in August 2012. The LC gave direction for the final TM in November 2012, and further revisions were made in response to comments in early 2013.

For this Plan Update effort, the OSHARTM represents a significant compilation of knowledge and expertise from both land use and water resource managers. And while regional open space and habitat targets were developed through this process, full vetting by the Subregions was not possible and further development of targets at the local level is necessary to reflect local land use policies and General Plans. Therefore, subregional targets are not included in the subregional appendices to this Plan. Because the IRWMP process is on-going there will be future opportunities to build upon these efforts. More dialogue between municipal land use planners, councils of governments and outdoor resource planners will be needed in the refinement of targets and objectives at the local level in the next Plan Update.

The OSHARTM and the resulting objectives are described in greater detail in Chapter 3 and the TM is provided as Appendix H.

### Subregional Plans

Given the unique and varied nature of each of the Region’s five Subregions, the GLAC Region developed five Subregional Plans to better detail the Regional Description (Chapter 2); identify subregional needs, objectives and targets (Chapter 3); identify management strategies and integration opportunities (Chapters 4 and 5) as well as to facilitate stakeholder input on these topics.

The five draft Subregional Plans were developed from input received from stakeholders at regularly scheduled Subregional Steering Committee meetings held from 2011 through 2012. They were reviewed by SC members and stakeholders and the finalized Subregional Plans are provided as Appendices I-M to this Plan Update.

As Figure 1-8 shows, LC Subcommittees also provided input on the climate change analysis presented in Chapters 2, 3 and 4 as well as the project review process developed, implemented and described in Chapter 5.

### Draft and Final Plan Update

Chapters of the Draft 2013 Plan Update were drafted and reviewed by the Projects & Plan Update Subcommittee. A Revised Draft Plan



Update was then prepared and noticed for a 45-day public review. The Projects & Plan Update Subcommittee considered and responded to all comments received, and made edits as appropriate. The LC then reviewed the subcommittee's edits before taking the document to their governing body for approval. The Final Plan will be adopted at the publically noticed February 2014 Regional Water Management Group LC meeting. The Regional Water Management Group will also adopt the Plan before submittal to DWR on or before February 2014.

## 1.8 Future Plan Updates or Amendments

The Region has and will continue to evolve as a result of new regulatory requirements and planning needs as well as progress on achieving Plan objectives and targets through successful project implementation. Therefore, the GLAC Region is taking an adaptive management approach to ensuring that the IRWM Plan is a dynamic and relevant document.

There are, however, on-going IRWM processes that are described in this Plan Update that could result in constant changes - such as new and modified Plan projects and prioritization and progress on Plan performance and meeting objectives and targets. Because of the dynamic nature of these IRWM processes, this Plan Update documents the process used to allow for these changes. These project development and review processes and information on how to access current project listings and prioritizations are detailed in Chapter 5. The GLAC IRWM process for documenting plan performance and data management are included as part of Chapter 7. As part of the normal plan management activities, the benefits and impacts will be reviewed with each IRWM Plan Update.

Given the amount of resources and time necessary for full Plan updates (such as this 2013 Update) future updates will be dependent upon the need to meet changing DWR requirements and the funding available but will occur no less frequent than every five years.

## 1.9 Technical Analysis

An extensive list of existing plans, studies, and other documents and information sources were reviewed to prepare the TMs and the Plan Update. These documents and data sources were compiled from the Region's stakeholders and vetted during the review of the Plan Update documents.

Table 1-3 on the following page provides a summary of the documents and data sources used, their method of analysis, the results derived and how they were used in the Plan Update.

These documents, along with input from the stakeholder workshops, provide a basis for the mission, objectives, and planning targets articulated in this Plan. The documents also inform the Region's short-term and long-term priorities and the water management strategies that are relevant.

In general, the discussion of water supply relies upon water supply and demand information from recently completed 2010 Urban Water Management Plans (UWMPs) from water agencies in the Region and any affiliated Groundwater Management Plans (GWMP), Recycled Water Master Plans (RWMP), and Integrated Resources Plans (IRP) including the 2010 MWD IRP. The regional description and discussion of water quality issues is derived from local watershed plans/databases and existing and proposed total maximum daily load (TMDL) requirements. Flood management information was collected from Federal Emergency Management Agency (FEMA) sources as well as LACFCD regarding both recent flood and sedimentation information and studies.

## 1.10 Plan Update Outcomes

A number of outcomes resulted from stakeholder involvement during the 2013 Plan Update process. These efforts built upon the foundation developed and described in the 2006 Plan to accomplish the following:

- Improve outreach to DAC and other stakeholders
- Refine objectives and targets reflecting existing regional and subregional planning
- Increase subregional detail and focus

- Increase understanding of habitat, recreation and open space needs and opportunities
- Develop new tools to determine water quality and open space benefits and support integration
- Improve project database, user interface and review process
- Create a comprehensive assessment of potential climate change impacts, vulnerabilities and strategies

### Improved Outreach

As described in the Stakeholder Outreach Section 1.5, the Region engaged in the development of the DAC Outreach Evaluation Program which developed and tested methodologies to increase DAC outreach, engage and receive input from DACs on water issues and needs, and facilitate DAC project development. Ongoing review of participation and distribution list gaps by Subregions as well as the creation of the Region's web-interface project database further contributed to the ability to outreach to DAC and other stakeholders.

### Refined Objectives and Targets

The 2006 Plan objectives were developed to provide overarching targets that related to other regional planning assumptions. As part of the 2013 Plan Update, the GLAC Region determined that further refining of both objectives and targets were necessary to achieve better consistency with local planning efforts and strike a balance between those that could be easily achievable and those that inspire the Region to do more.

A grass-roots process was implemented to create subregional targets that would roll up into overall regional targets. The quantitative subregional targets that were developed allowed local stakeholders to better participate in the process through vetting them against current planning efforts by both water and land use management agencies and groups.

The process resulted in quantified targets for each Subregion that provided the basis for being able to measure progress toward the objectives developed for the region. These objectives and targets are further detailed in Chapter 3.

### Increased Subregional Detail and Focus

The idea to develop individual stand-alone Subregional Plans was born from requests made by stakeholders to have a document that could clearly articulate the area in which they function as it relates to the needs and opportunities available for further planning and project implementation efforts. The Subregional Plans form the basis for the overall regional description provided as Chapter 2, but also are available in their entirety as appendices to this Plan Update (Appendices I-M).

### Increased Understanding of Habitat, Recreation and Open Space

In developing the objectives and targets for the 2006 Plan, it was clear that the level of information available to assess Region's needs for additional open space, habitat and recreation opportunities was limited relative to other management areas like water supply and quality. Stakeholders with interests in enhancing, protecting and creating open space, habitat and recreation opportunities saw a need for in-depth analysis in order to develop a plan that could correlate these needs with the other water management strategies to identify opportunities for truly integrated projects.

As part of the 2013 Plan Update, the Region developed the OSHARTM. The analysis and findings of this TM have been incorporated into the 2013 Plan Update by enhancing the regional description in Chapter 2, providing refined regional habitat and recreation objectives and targets in Chapter 3, contributing management strategies in Chapter 4 and providing tools for project development and integration as described in Chapters 5 and 6.

### New Needs, Benefits, and Integration Tools

As part of developing the Subregional Plans, Objective and Target TMs and the OSHARTM, new tools were created to facilitate the analysis.

For the water quality objective and target development, a tool that can facilitate prioritization of local catchments based upon the number and severity of impaired water bodies downstream was developed for each Subregion from existing data sources. A companion tool was also created

Table 1-3: Technical Analysis

Data or Study	Analysis Method	Results/Derived Information	Use in IRWM Plan	Reference or Source
<p><b>Population Projections</b></p>	<ul style="list-style-type: none"> <li>• Extracted 2010 populations using 2010 Census block group data</li> <li>• Projected population increase using SCAG population projected increases for Los Angeles County.</li> </ul>	<ul style="list-style-type: none"> <li>• Presented 2010 population</li> <li>• Projected 2035 population</li> </ul>	<ul style="list-style-type: none"> <li>• Used to describe Regional characteristics, estimate park needs</li> </ul>	<ul style="list-style-type: none"> <li>• Census Bureau, 2010. US Census 2010 statistics.</li> <li>• Southern California Association of Governments, 2008. Adopted 2008 RTP Growth Forecast, by City.</li> </ul>
<p><b>Water Supply Targets TM</b></p>	<ul style="list-style-type: none"> <li>• Reviewed local water resource planning documents to obtain 2010 and 2035 local water supply projections</li> <li>• Conducted Water Supply Subcommittee meetings to review results of water resource planning document analysis, and to determine methodology to be used to create targets</li> <li>• Calculated difference between 2035 and 2010 supplies to determine water supply targets</li> </ul>	<ul style="list-style-type: none"> <li>• Established 2010 water supplies and calculated 2035 projected supplies</li> <li>• Developed targets for improvement of local supplies including ground-water, recycled water, stormwater, desalinated ocean water, conservation, and imported water</li> </ul>	<ul style="list-style-type: none"> <li>• Used to describe current water supplies and to identify targets for increases in local supplies.</li> </ul>	<ul style="list-style-type: none"> <li>• 2010 Urban Water Management Plans (various)</li> <li>• Main San Gabriel Basin Watermaster, 2010. Annual Reports</li> <li>• Raymond Basin Management Board, 2010. Annual Report.</li> <li>• Upper Los Angeles Area Watermaster, 2010. Annual Report.</li> <li>• Water Replenishment District, 2012. Groundwater Basins Master Plan.</li> <li>• Pasadena Water and Power Recycled Water Master Plan.</li> <li>• LADWP Recycled Water Master Plan.</li> </ul>
<p><b>Stormwater Quality Targets TM</b></p>	<ul style="list-style-type: none"> <li>• Used the Structural BMP Prioritization and Analysis Tool (SBPAT) to prioritize catchments based on: Approved TMDLs, 303(d) listings, and Areas of Special Biological Significance (ASBS)</li> <li>• Conducted Water Quality Subcommittee meetings to review results of SBPAT analysis, and determine method to be used in creating stormwater quality targets</li> <li>• Stormwater quality targets calculated based on catchment area, assuming capture of 0.75-inch storm</li> </ul>	<ul style="list-style-type: none"> <li>• Established high, medium and low priority watershed catchments for water quality improvement needs</li> </ul>	<ul style="list-style-type: none"> <li>• Used to identify catchments of higher priority for improving surface water quality, and to quantify the acre-feet of available capture capacity necessary to treat low, medium and high priority catchment runoff</li> </ul>	<ul style="list-style-type: none"> <li>• Geosyntec Consultants, 2008. A User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT v1.0).</li> <li>• Los Angeles Regional Water Quality Control Board (LARWQCB), 2002. Municipal Stormwater Q&amp;A.</li> <li>• State Water Resources Control Board (SWRCB), 2010. 2010 Integrated Report (Clean Water Act Section 303/3 List / 305(b) Report) - Statewide.</li> </ul>

Table 1-3: Technical Analysis

Data or Study	Analysis Method	Results/Derived Information	Use in IRWM Plan	Reference or Source
<p><b>Flood Management Targets TM</b></p>	<ul style="list-style-type: none"> <li>Conducted GIS analysis to overlay FEMA Special Flood Hazard Areas with parcels to determine area at risk of flooding</li> <li>Calculated historical sediment accumulation at reservoirs and debris basins to estimate 20 year sediment removal requirements</li> </ul>	<ul style="list-style-type: none"> <li>Calculated area (in acres) of parcels lying within the 100-year flood zone</li> <li>Developed volume of sediment that will accumulate at reservoirs and debris basins over 20 years</li> </ul>	<ul style="list-style-type: none"> <li>Used to identify flood management targets</li> </ul>	<ul style="list-style-type: none"> <li>Los Angeles County Flood Control District, 2012. Coastal Regional Sediment Management Plan – Los Angeles County. Draft Version.</li> <li>Los Angeles County Flood Control District, 2012. Los Angeles County Sediment Management Strategic Plan 2012-2032.</li> <li>U.S. Army Corps of Engineers, 2012. Planning Guidance Notebook.</li> <li>Los Angeles County and Southern California Association of Governments, 2006. GIS shapefile of land use.</li> </ul>
<p><b>Open Space, Habitat and Recreation TM</b></p>	<ul style="list-style-type: none"> <li>GIS analysis conducted to assess:                             <ul style="list-style-type: none"> <li>Existing versus historical aquatic habitat area</li> <li>Buffer areas that provide connection between aquatic habitat and upland habitat</li> <li>Open space area available for passive and active recreation</li> </ul> </li> <li>Subcommittee meetings conducted to review results of GIS analysis and determine methodology for creating targets</li> <li>Applied percentage to calculate area targets for restoration, enhancement and preservation</li> <li>Determined standards for recreational area per capita based on State and County recreation standards</li> <li>Calculated recreational open space area per capita using population projections</li> </ul>	<ul style="list-style-type: none"> <li>Established need for open space areas in support of water resources issues</li> <li>Developed maps and area of existing versus historic aquatic habitat</li> <li>Developed maps of existing open space areas for recreation and areas that do not meet minimum standards for open space area per capita</li> <li>Developed targets for restoration, enhancement and preservation of aquatic habitat</li> <li>Developed targets for passive and active recreation</li> </ul>	<ul style="list-style-type: none"> <li>Used to define existing aquatic habitat area, and existing parks and recreation areas</li> <li>Used to define objectives and targets for aquatic habitat preservation, enhancement and restoration</li> <li>Used to define objectives and targets to increase open space for passive and active recreation</li> </ul>	<ul style="list-style-type: none"> <li>Rairdan, C., 1998. Regional restoration goals for wetland resources in the Greater Los Angeles Drainage Area: A landscape-level comparison of recent historic and current conditions using Geographical Information Systems. Dissertation. University of California, Los Angeles. NWI Center for Watershed Protection, 2005. Wetlands and Watersheds: Adapting Watershed Tools to Protect Wetlands Bond.</li> <li>California Protected Area Database (CPAD) USFWS, 2012. Endangered and Threatened Species for Los Angeles County.</li> <li>USFWS, 2011. Critical Habitat for the County of Los Angeles.</li> <li>Los Angeles County Department of Regional Planning, 2011. Los Angeles County General Plan 2035. Public Review Draft. Los Angeles, CA: LA County DRP.</li> <li>Greeninfo Network, 2012. Parks and recreation sites shapefiles.</li> <li>Stein, E., S. et al. 2010. Historical Ecology as a Tool for Assessing Landscape Change and Informing Wetland Restoration Priorities.</li> <li>Dark, Shawna, et al. "Historical Ecology of the Ballona Creek Watershed." Southern California Coastal Water Research Project Technical Publication.</li> <li>Lilien, J.P., 2001. Cumulative impacts to riparian habitat in the Malibu Creek watershed. D. Env. Dissertation, University of California, Los Angeles.</li> <li>State of California Governor's Office of Planning and Research, 2003. State of California General Plan Guidelines. Sacramento, CA: Governor's OPR.</li> </ul>

to assess the potential water quality benefits of projects implemented in these catchments. These tools are further described in the Water Quality Objectives and Targets TM (Appendix F) and Chapter 3.

To further foster the development of integrated projects with regional partners, a geodatabase was created and formatted from existing data sources. Each layer in the GLAC Region's Potential Benefits Geodatabase was formatted to highlight areas where certain water management area benefits could be achieved based upon their geographic conditions. By overlaying these layers and viewing them together the viewer can determine places where the potential for multiple benefits could be achieved if projects were implemented. This tool, and some initial analysis, are further described subregionally within each of the Subregional Plans (Appendices I-M) and in Chapters 6 and 7.

### Improved Project Database and Review Process

The 2006 Plan referred to an initial project listing that was developed from hundreds of proponents uploading projects to a central database. The analysis provided as part of Chapter 5 of the 2006 Plan focused on a discussion of that static list relative to the Region's goals and objectives. For the 2013 Plan Update, the Region chose to focus on creating a more dynamic process for project development and vetting. This process included the development of the project database and website which improved the ability for proponents to upload project information, GLAC Steering Committees to review and vet this information, and interested parties to view and use this information. This process and a link to the current project list is fully described in the greatly updated Chapter 5, which now focuses on process instead of an assessment of the current list.

### Climate Change

The DWR November 2012 Guidelines for IRWM Plans requires that all Plans contain an analysis of potential climate change impacts, vulnerabilities, and both adaptation and mitigation strategies to be used in addressing those vulnerabilities. In response, the GLAC Region created a Climate Change Subcommittee to provide the input necessary to prepare this analysis. The Climate Change Subcommittee met to discuss the information available on both state, regional and local climate change impact analysis; the vulnerabilities associated with those impacts; prioritization of vulnerabilities and both mitigation and adaptation strategies that could be used to address those vulnerabilities.

The full description of the process used as well as the results is provided in Chapter 2. Climate change related objectives were included in Chapter 3 and management strategies in Chapter 4.