



1. GOVERNANCE AND PARTICIPATION

San Gabriel Mountains

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

1.1 Background

To meet the demand for water in the Greater Los Angeles County Region (GLAC Region or 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 quickly transports runoff to the ocean but provides limited opportunities for percolation of runoff and hinders the potential for natural processes to reduce or transform pollutants. As a result, most of the trash, metals, bacteria, and organic chemicals from developed areas are transported directly to inland water bodies and downstream coastal bays. This results in impairments that hinder the designated beneficial uses of surface water bodies. In some areas, land practices, inadequate disposal of industrial materials, and leaking underground storage tanks have contaminated soils and percolated to some of the Region's groundwater basins, reducing the ability to use these supplies.

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):

1.2 Context

“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.”

To ensure 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. This Integrated Regional Water Management Plan (IRWMP or Plan) reflects the 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.

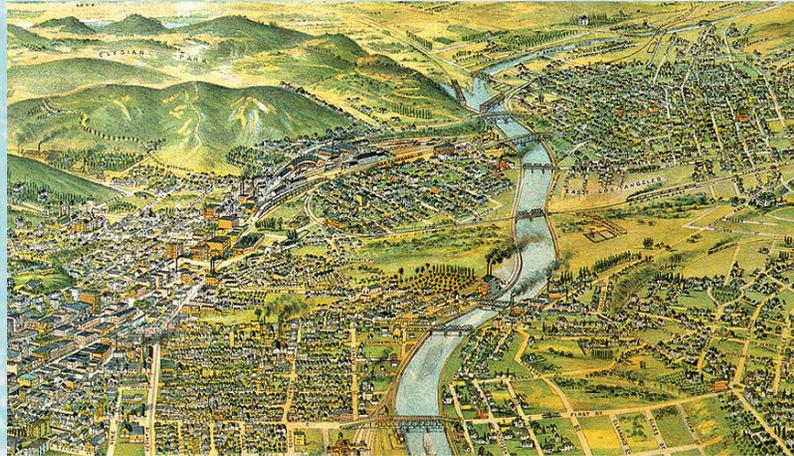
This Plan also provides an opportunity to include information on the region’s needs and future at a scale that can contribute to the California Water Plan.

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 resource management in this Region is not new.



Map 1-1. Greater Los Angeles 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.

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 challenges such as population growth, densification, traffic congestion, 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 purpose of this IRWM Plan is 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 4 counties, nearly 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



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.”**

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 (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 opportunities 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) comprised 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 comprised 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 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 MOU. All LC member terms are reviewed at least every three years.

The Leadership Committee also includes 5 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 (USACE): Los Angeles District.

The Leadership Committee holds monthly publicly 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 GLACs IRWM website www.lawaterplan.org and are made available to those without computer access by contacting LACFCD staff.

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

Chair

Los Angeles County Flood Control District (LACFCD). 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 causing 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 15 major dams, 14 rubber dams, 529 miles of open channels, 2,811 miles of underground storm drains, 77,917 catch basins, 48 stormwater pumping plants, 116 sediment entrapment basins, 232 concrete crib check dams, 27 groundwater recharge facilities, 35

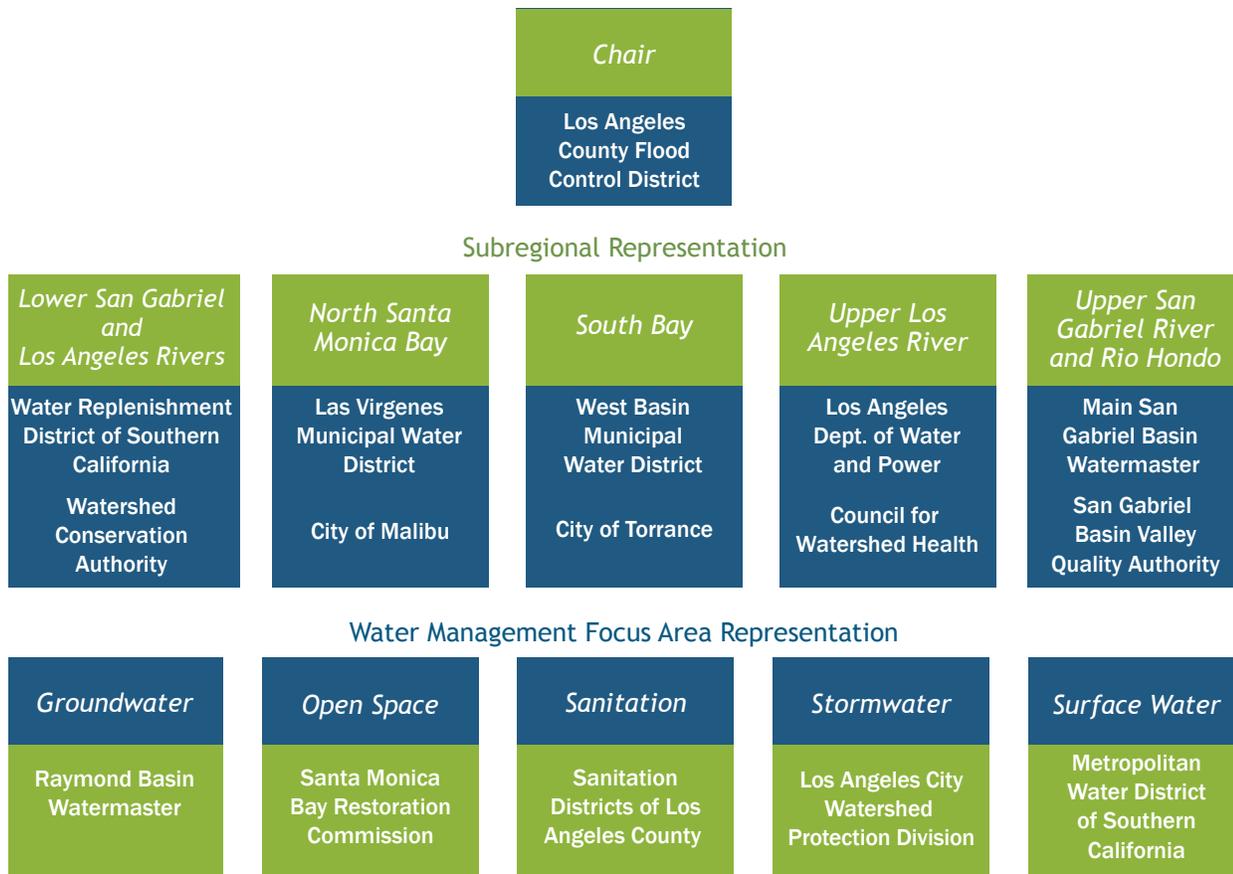


Figure 1-2. Leadership Committee Representation. The Leadership Committee consists of representatives from each Steering Committee and each Water Management Area.

sediment placement sites, and 3 seawater intrusion barriers. 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.

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 West Basin Water Recycling Facility in El Segundo, where approximately 28,000 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's goal 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 throughout the Los Angeles and San Gabriel River Watersheds.

Upper San Gabriel and Rio Hondo Rivers Subregion

Main San Gabriel Basin Watermaster (MSG Watermaster). The MSG Watermaster is the Chair of the Upper SG & RH 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 Watermaster (Raymond Watermaster). The Raymond Watermaster represents the Groundwater Management Area on the LC. The Raymond Watermaster 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, DAC, Plan and Project Development, Water Supply, Water Quality, Habitat & Open Space and Climate Change.



MILESTONE ACCOMPLISHMENTS

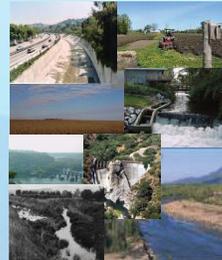
Demonstrated cooperative efforts between Regional and Subregional groups



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 DACs and new participants.

Figure 1-3. Leadership and Subregional Steering Committees. The GLAC Region has successfully developed 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 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 comprised 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.

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 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 sections completed by Consultant.

Climate Change Subcommittee is an ad-hoc Subcommittee that is comprised 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 comprised 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 MOU 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 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 meet-



Map 1-2. IRWMP Subregions, Los Angeles Region.

ings 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. The Administrator is responsible for managing the Subregional project development and review process that is maintained in the GLAC project database as well as posting of meeting agenda and minutes and other relevant announcements to the Region’s website (at 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. IRWMP information is also posted on the GLAC Website at www.lawaterplan.org.

Subregional SC Administrators also 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.

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 includes hundreds of cities, agencies, districts, and organizations.

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

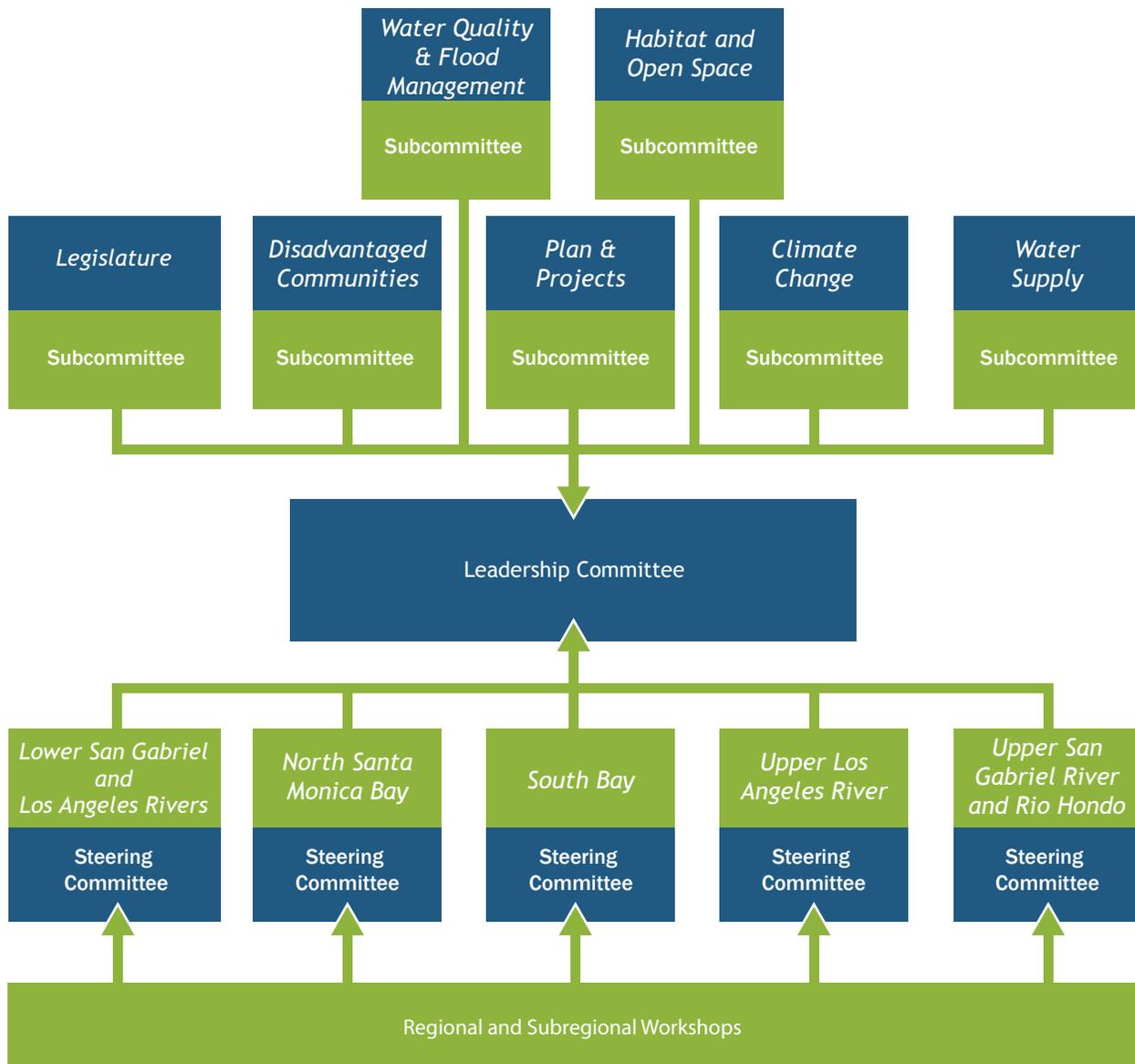


Figure 1-4. Stakeholder Participation in GLAC Governance Structure

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 and Resource Conservation District of the Santa Monica Mountains.

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

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

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

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

Regional District or Authority	GLAC Region Cities and Communities Served
Central Basin MWD*	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
Foothill MWD*	Altadena, La Cañada Flintridge, La Crescenta, Montrose
Las Virgenes MWD*	Agoura Hills, Calabasas, Chatsworth, Lake Manor, Hidden Hills, Malibu Lake, Monte Nido, Westlake Village, West Hills
Metropolitan Water District of Southern California	Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Los Angeles, Pasadena, San Fernando, San Marino, Santa Ana, Santa Monica, Torrance
Municipal Water District of Orange County*	Brea, Buena Park, Cypress, La Habra, La Palma, Los Alamitos, Placentia, Seal Beach
San Gabriel Basin Water Quality Authority	Baldwin Park, Bradbury, Duarte, La Puente, La Verne, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, Temple City, West Covina
San Gabriel Valley MWD	Alhambra, Azusa, Monterey Park, Sierra Madre
Southeast Water Coalition Joint Powers Authority	Cerritos, Commerce, Downey, Huntington Park, Lakewood, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, South Gate, Vernon and Whittier
Three Valleys MWD*	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
Upper San Gabriel Valley MWD*	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
Water Replenishment District of Southern California	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
West Basin MWD*	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 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 more 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.

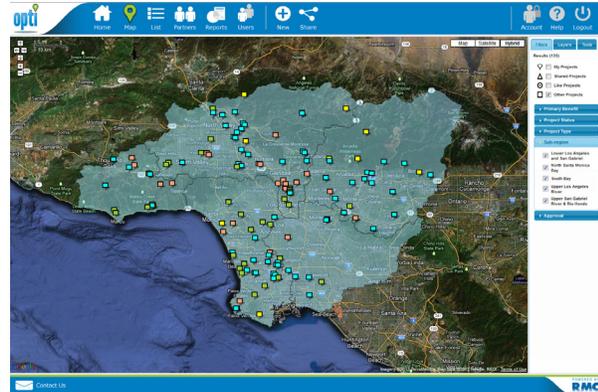


Figure 1-6: Project database: The OPTI project database provides stakeholders through the Region equal and immediate access to project and program information including the results of the project review process and integration opportunities.

Disadvantaged Community Outreach

Outreach to disadvantaged communities (DACs) in the Region is a priority. DWR defines DACs as a community with a median household income that is less than 80 percent of statewide annual median household income (DWR, 2010).

When the 2006 Plan was being developed, initial efforts to identify and encourage participation from DACs and other stakeholders were conducted. These efforts included mapping of DAC communities relative to subregions; meeting with local community coalitions with membership or connections 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); individual phone conversations; and presenting at group meetings and organizations.

In 2008, the Region prepared an interim DAC Outreach Plan which identified a basic (subregion-focused) process for the Region to conduct DAC outreach. At the direction of the LC and with direct input by the five sub-regional steering committees, a DAC Subcommittee was formed to oversee and review the creation of the DAC Outreach Plan. The DAC Subcommittee recommended approval of the interim Outreach Plan in recognition of significant information gaps about the needs of DACs relative to the IRWMP. As the

Outreach Plan was being implemented, it became clear that given the size and population within each Subregion, and therefore the Region as whole, identifying representatives that could speak to the DAC's issues relative to water management was incredibly challenging.

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

DAC Coordinator

The GLAC IRWM DAC Coordinator position was developed to facilitate DAC outreach. The DAC Coordinator functions as a liaison to between the GLAC Region and DACs. The primary functions of the position include:

- Being a liaison between community groups, non-profit organizations, DACs and GLAC IRWM LC and SC members
- Meeting with and coordinating outreach activities with community members, associations, and non-profit organizations
- Gathering and analyzing information pertinent to DAC project development throughout the Region
- Coordinating with contractors and consultants in the achievement of Regional objectives

The DAC Coordinator also participates in reviewing the DAC projects being submitted for consideration for implementation funding. This includes attending meetings with proponents, project site visits, and reviewing the grant applications for consistency with both the DWR requirements as well as the DAC Criteria developed by the DAC Committee (included as Appendix B).

DAC Outreach Evaluation Program

It was the DAC Subcommittee's understanding that in order to conduct effective DAC outreach and receive meaningful DAC input for the IRWM process, a more robust and researched process should be developed and tested. As a result, the GLAC Region applied for and received specialized funding from DWR to develop a draft outreach process and implement the process as a pilot program that could then be used to revise the

process based on lessons learned. Funding of the DAC Outreach Evaluation Program also allowed for implementation of this revised process at four other DAC communities or areas.

The DAC Outreach Evaluation Program is currently being implemented by the Council for Watershed Health in the following communities:

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

The Program is designed to work with a local Outreach Contractor with experience in working with the entities that often provide a voice to the residents and businesses living and operating in the DAC communities. The Outreach Contractors serve to provide information about the IRWM Program and facilitate input (using a variety of methods tailored to each community) from community members about water related needs and interests within their communities.

Once needs and interests were voiced, the next step was to identify any projects that were already conceived as well as new project concepts that could be developed to meet these needs. The project development process also looked for opportunities for regional partnerships with agencies as well as how to enhance projects by including integrated components that could also solve other water management needs. As a result of this process, four projects were identified for consideration during the Region's November 2012 Proposition 84 Round 2 Implementation Grant Application project selection process.

Alcanza Outreach Project

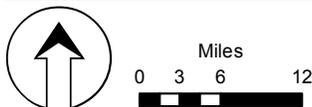
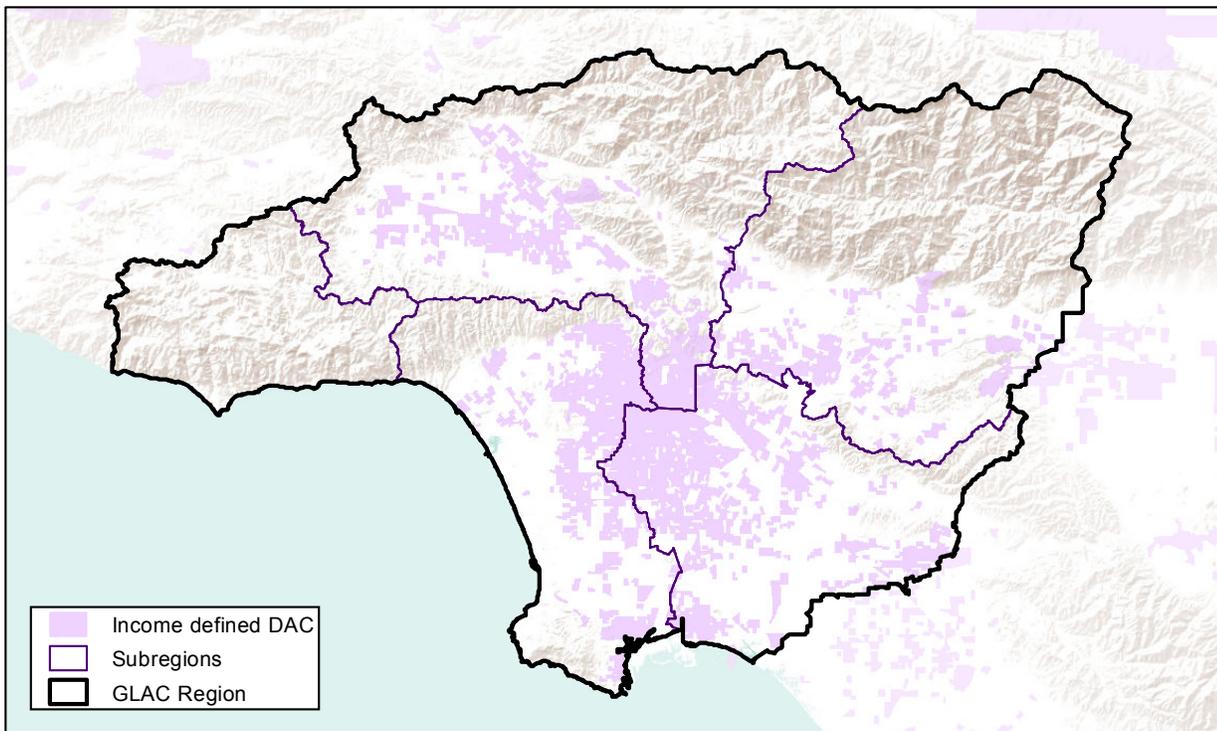
There are over 60 identified DACs within the greater Los Angeles IRWM region. One goal of the DAC Subcommittee is to improve the potential for DACs to receive implementation funding for their projects. As the Chair of the DAC Subcommittee, the Rivers and Mountains Conservancy has been working with community organizations to improve that potential through increased involvement and support. In 2011, the RMC 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 kind of urban communities within the GLAC Region.

Beyond these specific DAC outreach and involvement efforts, many entities that represent or provide benefits to DAC communities attend and participate in the regional IRWM 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.



Disadvantaged Communities
Greater Los Angeles County
Integrated Regional Water Management Plan

Map 1-3

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 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 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 either directly, or through the participation of a Council of Governments (COG) representative. Four COGs (Gateway Cities, Westside Cities, San Gabriel Valley Cities, South Bay Cities) have been active in the IRWMP process. Through the stakeholder workshops, the water agencies, cities, COGs and municipal agencies have advocated for their respective local planning needs and issues, which have been incorporated into the IRWMP. COGs and municipal agencies have advocated for their respective local planning needs and issues, which have been incorporated into the IRWMP.

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



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.



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.

Watersheds Coalition of Ventura County Region (WCVC). A portion of GLAC’s NSMB Subregion is within Ventura County. Therefore, WCVC representatives are on NSMB and LC distribution lists and have attended NSMB SC meetings to share project information, look for intra-regional integration opportunities and learn about the GLAC Plan Update. NSMB 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 LLAG Subregion. Overlapping stakeholders are on the LLAG and LC distribution list and are encouraged to and have attended meetings.

Gateway Region. The GLAC IRWM Region boundary wholly contains the Gateway IRWM Region. During the IRWM Program Regional Acceptance Process (RAP), no changes to the GLAC IRWM 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 storm water 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 our 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 ULA and USGRH 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 (MWD), 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, a consultant team was selected to consolidate the 6 efforts and develop 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 prepare a plan was published in May 2013 (Appendix C) and on [to be filled in for Final version], 2013 a public notice of intention to adopt the Plan was published (Appendix D).

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 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 regularly scheduled Subregional SC and LC Subcommittee meetings and then distributed for review as shown in Figure 1-7. 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 regularly scheduled LC meetings.

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 existing regional objective topics by creating subregional targets for as many objective areas as possible 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, subcommittees of the LC were formed in order to determine methods and format that could be used by SCs to develop actual numeric targets and then to review and approve the resulting regional "rolled up" objectives and targets. These subcommittees included water planning 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)

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 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 projects included in the Plan be adopted by the agencies proposing the projects. If inconsistencies between local and regional plans are identified in the future, the LC will work with agencies to identify the differences and resolve them in a future Plan Update.

These TMs 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 MS4 Permit by the LA 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 together 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.

Open Space, Habitat and Recreation Plan

To develop similar objectives and targets for open space, habitat and recreational goals, the Region determined that a much more robust planning effort was needed. The resulting OSHARP document was developed to define open space habitat recreation needs within the region that could be met through the implementation of integrated water management planning and projects. This plan was developed under the direction of the Habitat and Open Space Subcommittee (HOSP) 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 when the Subcommittee finalized targets. A report was drafted in April and the Subcommittee provided comments on two drafts through June. The report was then presented to Subregions and presentations were given to each subregion in August, 2012. Comments were due by September. The LC discussed and gave direction for the final report in November 2012.

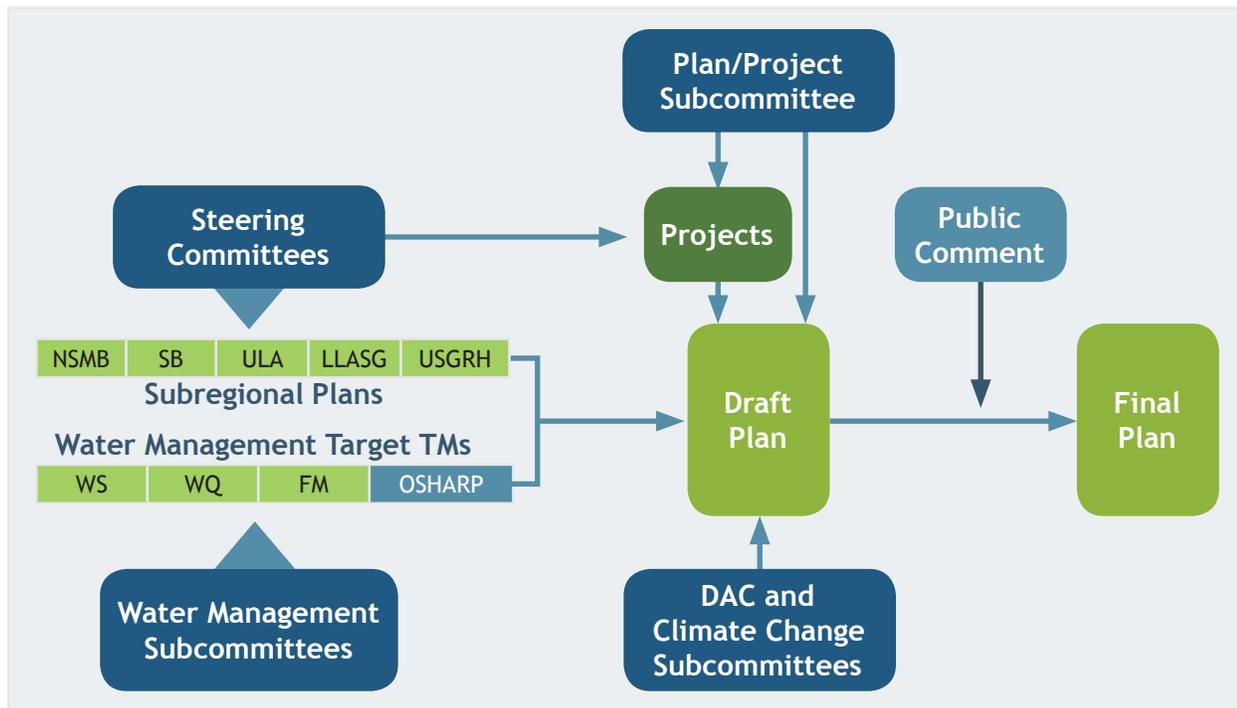


Figure 1-7: 2013 Plan Update Deliverables and Process

For this Plan Update effort, the OSHARP represents the outcome of a significant exchange of knowledge and expertise between land use and water resource managers. And while agreement on regional open space and habitat targets were developed through this process, the sensitive local land use issues precluded agreement on subregional targets. It is understood that the IRWMP process is on-going and therefore there are opportunities to build upon these efforts. More dialogue between municipal land use planners, councils of governments and resource planners will be needed in the refinement of targets and objectives at the local level in the next Plan Update.

The OSHARP and the resulting objectives are described in greater detail in Chapter 3 and 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 G - K to this Plan Update.

As Figure 1-2 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

Sections 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 30-day public review. The Final Plan was adopted at the publi-

cally noticed [to be filled in for Final version] 2013 LC meeting after a public hearing on the topic. All members of the LC also adopted the Plan before submittal to DWR on or before [to be filled in for Final version] 2013.

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.

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

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

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 TMDL requirements. Flood management information was collected from FEMA sources as well as LACFCD regarding both recent flood and sedimentation information and studies.

The 2013 Plan Update included a task that involved creating a comprehensive habitat and open space planning effort to fill in a need identified as part of the 2006 Plan. The OSHARP development involved the review and use of nearly 1000 documents and data sources as well as original analyses.

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.

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.

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 DACs 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 DACs and other stakeholders.

Refined Objectives and Targets

The objectives developed as part of the 2006 Plan 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 avail-

Table 1-3: Technical Analysis

Data or Study	Analysis Method	Results/Derived Information	Use in IRWM Plan	Reference or Source
Population Projections	<ul style="list-style-type: none"> Extrapolated 2010 populations using 2010 Census block group data Projected population increase using SCAG population projected increases for Los Angeles County. 	<ul style="list-style-type: none"> Presented 2010 population Projected 2035 population 	Used to describe Regional characteristics, estimate park needs	<ul style="list-style-type: none"> Census Bureau, 2010. US Census 2010 statistics. Southern California Association of Governments, 2008. Adopted 2008 RTP Growth Forecast, by City.
Water Supply Targets TM	<ul style="list-style-type: none"> Reviewed of local water resource planning documents to obtain 2010 and 2035 local water supply projections Conducted Water Supply Subcommittee meetings to review results of water resource planning document analysis, and to determine methodology to be used to create targets Calculated difference between 2035 and 2010 supplies to determine water supply targets 	<ul style="list-style-type: none"> Established 2010 water supplies and Calculated 2035 projected supplies Developed targets for improvement of local supplies including ground-water, recycled water, stormwater, desalinated ocean water, conservation, and imported water 	Used to describe current water supplies and to identify targets for increases in local supplies.	<ul style="list-style-type: none"> 2010 Urban Water Management Plans (various) Main San Gabriel Basin Watermaster, 2010. Annual Reports Raymond Basin Management Board, 2010. Annual Report. Upper Los Angeles Area Watermaster, 2010. Annual Report. Water Replenishment District, 2012. Groundwater Basins Master Plan. Pasadena Water and Power Recycled Water Master Plan. LADWP Recycled Water Master Plan.
Stormwater Quality Targets TM	<ul style="list-style-type: none"> 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) Conducted Water Quality Subcommittee meetings to review results of SBPAT analysis, and determine method to be used in creating stormwater quality targets Stormwater quality targets calculated based on catchment area, assuming capture of 0.75-inch storm 	<ul style="list-style-type: none"> Established high, medium and low priority watershed catchments for water quality improvement needs 	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	<ul style="list-style-type: none"> Geosyntec Consultants, 2008. A User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT v1.0). Los Angeles Regional Water Quality Control Board (LARWQCB), 2002. Municipal Stormwater Q&A. State Water Resources Control Board (SWRCB), 2010. 2010 Integrated Report (Clean Water Act Section 303(3) List / 305(b) Report) - Statewide.
Flood Management Targets TM	<ul style="list-style-type: none"> Conducted GIS analysis to overlay FEMA Special Flood Hazard Areas with parcels to determine area at risk of flooding Calculated historical sediment accumulation at reservoirs and debris basins to estimate 20 year sediment removal requirements 	<ul style="list-style-type: none"> Calculated area (in acres) of parcels lying within the 100-year flood zone Developed volume of sediment that will accumulate at reservoirs and debris basins over 20 years 	Used to identify flood management targets	<ul style="list-style-type: none"> Los Angeles County Flood Control District, 2012. Coastal Regional Sediment Management Plan – Los Angeles County. Draft Version. Los Angeles County Flood Control District, 2012. Los Angeles County Sediment Management Strategic Plan 2012-2032. U.S. Army Corps of Engineers, 2012. Planning Guidance Notebook. Los Angeles County and Southern California Association of Governments, 2006. GIS shapefile of land use.

Table 1-3: Technical Analysis

Data or Study	Analysis Method	Results/Derived Information	Use in IRWM Plan	Reference or Source
<p>Open Space for Habitat and Recreation Plan</p>	<ul style="list-style-type: none"> • GIS analysis conducted to assess: • Existing versus historical aquatic terrestrial habitat area • Buffer areas that provide connection between aquatic habitat and upland habitat • Open space area available for passive and active recreation • Subcommittee meetings conducted to review results of GIS analysis and determine methodology for creating targets • Applied percentage to calculate area targets for restoration, enhancement and preservation • Determined standards for recreational area per capita based on State and County recreation standards • Calculated recreational open space area per capita using population projections 	<ul style="list-style-type: none"> • Established need for open space areas in support of water resources issues • Developed maps and area of existing versus historic terrestrial aquatic habitat • Developed maps of existing open space areas for recreation and areas that do not meet minimum standards for open space area per capita • Developed targets for restoration, enhancement and preservation of terrestrial aquatic habitat • Developed targets for passive and active recreation 	<p>Used to define existing terrestrial aquatic habitat area, and existing parks and recreation areas</p> <p>Used to define objectives and targets for terrestrial aquatic habitat preservation, enhancement and restoration</p> <p>Used to define objectives and targets to increase open space for passive and active recreation</p>	<ul style="list-style-type: none"> • Raidan, 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. • California Protected Area Database (CPAD) • USFWS, 2012. Endangered and Threatened Species for Los Angeles County • USFWS, 2011. Critical Habitat for the County of Los Angeles. • Los Angeles County Department of Regional Planning, 2011. Los Angeles County General Plan 2035. Public Review Draft. Los Angeles, CA: LA County DRP. • Greeninfo Network, 2012. Parks and recreation sites shapefiles. • Stein, E., S. et al. 2010. Historical Ecology as a Tool for Assessing Landscape Change and Informing Wetland Restoration Priorities. • Dark, Shawna, et al. "Historical Ecology of the Ballona Creek Watershed." Southern California Coastal Water Research Project Technical Publication. • Lilien, J.P., 2001. Cumulative impacts to riparian habitat in the Malibu Creek watershed. D. Env. Dissertation, University of California, Los Angeles. • State of California Governor's Office of Planning and Research, 2003. State of California General Plan Guidelines. Sacramento, CA: Governor's OPR.

able 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 G - K).

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 the potential for open space, habitat and recreation needs and 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 to develop a plan that could correlate these needs with the other water management needs to show opportunities for truly integrated projects.

As part of the 2013 Plan Update, the Region developed an Open Space, Habitat and Recreation Plan (OSHARP). The analysis and findings of this plan 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 OSHARP, 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 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

DWR's 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.