

# GLAC IRWM Lower Los Angeles & San Gabriel Subregional Plan Draft

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## 4 Partnership and Multi-benefit Opportunities

Implementation of projects is the vehicle to attaining the objectives and planning targets discussed in Section 3. Integration and collaboration can help these projects achieve synergies and increase their cost-effectiveness in meeting multiple objectives. The GLAC IRWM Region provides a wealth of potential multi-benefit project opportunities for partnership projects including:

- **Local Supply Development:** Alternative supply development such as distributed stormwater capture and recycled water projects are often too costly for a water supply agency to construct on their own for water supply purposes only. The near-term unit cost can be well in excess of the cost of imported water. However, other funding partners focused on the other benefits (like water quality) these projects could provide are often available to help with funding for implementation.
- **Improving Stormwater Quality:** The GLAC IRWM Region has prioritized drainage areas based on their ability to improve water quality for the coastal and terrestrial waters. Integrated projects that can provide water quality benefits can be cited relative to that prioritization to achieve the highest benefits.
- **Integrated Flood Management:** Earlier studies, such as the Sun Valley Watershed Plan, demonstrated the potential for similar cost-effective synergies between flood control, stormwater quality management, water supply, parks creation and habitat opportunities. Flood control benefits usually reached through a significant pipe construction project can be accomplished with alternative multi-benefit projects.
- **Open Space for Habitat and Recreation:** When habitat is targeted for restoration, there are often opportunities for cost-effective implementation of flood control, stormwater management and passive recreation walking and biking trails as well.

These synergies and cost effectiveness outcomes can best be attained when the unique physical, demographic and agency service area attributes of the region are considered in meeting the multiple objectives of the IRWM Plan. The GLAC IRWMP has developed tools to assist the GLAC IRWM Region in identifying areas and partnerships conducive to both inter-subregional and intra-subregional integrated project development. This section discusses these tools as well as some preliminary analyses on the South Bay Subregion's potential partnerships and integrated project opportunities.

### 4.1 GLAC IRWMP Integration Process and Tools

As part of the objectives and targets update process, the GLAC Region compiled and developed several geo-referenced data layers to assist in spatially identifying priorities and potential opportunities to achieve water supply, water quality, habitat, recreation and flood management benefits. These data layers were initially used individually to determine the objectives and planning targets for each water management area. However, these datasets can also be overlaid to visually highlight areas with the greatest potential to provide multiple benefits. The resulting Potential Benefits Geodatabase (Geodatabase) can also align these areas relative to other layers containing agency service areas and jurisdictions – allowing for project proponents and partners to be identified.

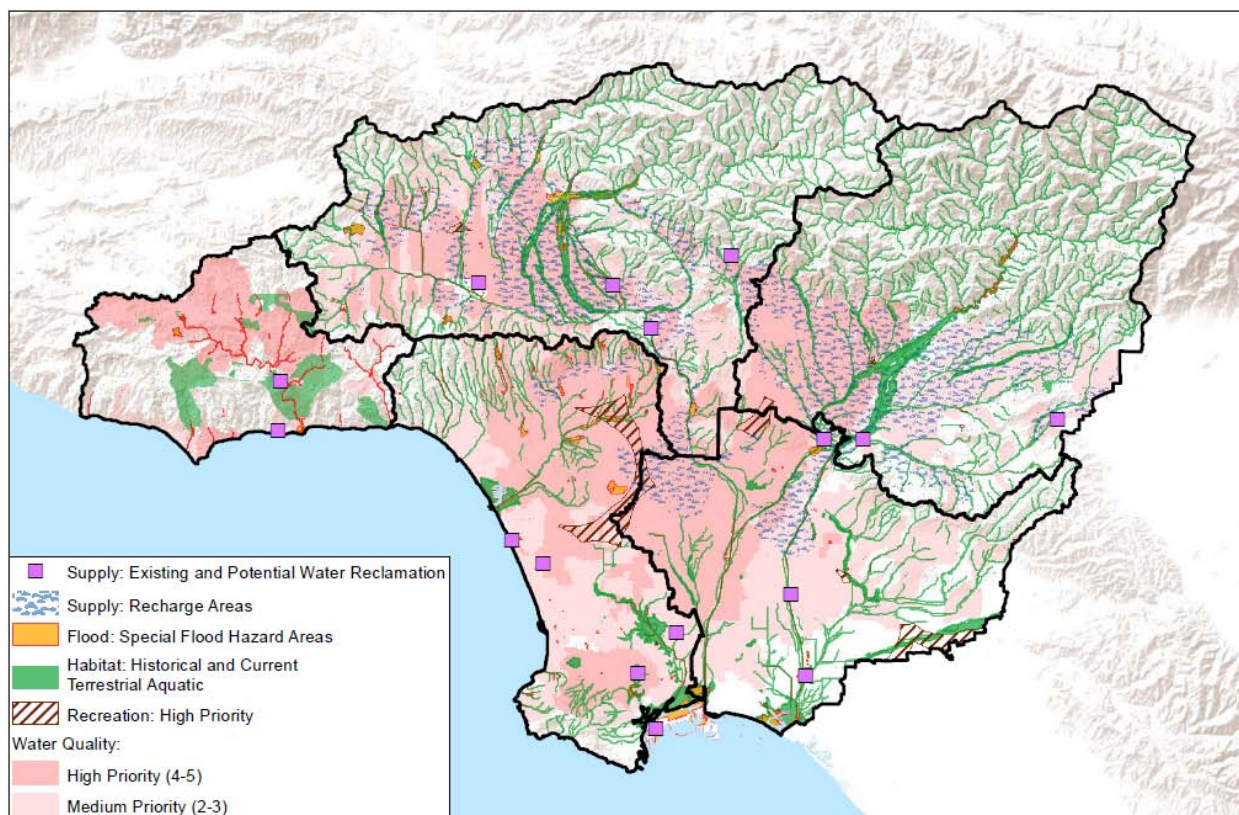
#### Potential Benefits Geodatabase

The GLAC IRWMP Potential Benefits Geodatabase is a dynamic tool that should be updated as new data is made available in order to maintain its relevance in the IRWM planning context. However, in order to provide an analysis of potential integration and partnership opportunities for the 2013 GLAC IRWM

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Plan, current data layers were overlaid and analyzed. The key layers used are shown in Figure 14 and described in Table 11. It should be noted that these datasets may not be complete or in need of further refinement – which is part of the dynamic process previously described. Therefore, the Geo-database should only be used as an initial step in identifying multi-benefit potential and by no means used to invalidate the potential for achieving benefits in other areas.

**Figure 14: GLAC Region Potential Benefits Geodatabase Layers**



## Using the Geodatabase

The Geodatabase is a dynamic visual tool. The data layers and maps shown in this Section are only some of a multitude of ways to package and view the datasets to help with the integration process. It is important to note that not all data that could be useful in identifying integration and partnership potential for the region is easily viewed spatially in this format. Therefore the Geodatabase should only be used as one of several potential integration tools or methods.

The Geodatabase can also be used to identify the potential for further integration between existing projects included in an IRWMP. Currently the GLAC Region has web-based project database (OPTI) that geo-references all projects included in the IRWM. As part of the 2013 Plan Update, this dataset of projects will eventually be updated and prioritized. This resulting project dataset could be included as a layer in the Geodatabase or conversely, the existing Geodatabase layers could be uploaded to OPTI for public viewing. Either way, by overlaying the current projects on top of the potential benefit layers, additional benefits could be added to existing project or linked to other projects and proponents through those benefits.

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**Table 9: Potential Benefit Geodatabase Layers**

Data Layer	Description
Supply: Recharge Areas <sup>1</sup>	Shows areas where soils suitable for recharging are above supply aquifer recharge zones. Thereby indicating that water infiltrating in these areas has the potential to increase groundwater supplies.
Supply: Existing and Potential Water Reclamation <sup>2</sup>	Shows locations of existing wastewater and water reclamation plants.
Flood: Special Flood Hazard Areas <sup>3</sup>	Shows some of the areas that would benefit from increased drainage to alleviate flooding potential.
Habitat: Historical and Current Terrestrial Aquatic <sup>4</sup>	Shows the combined current and historical habitat areas that would indicate the potential for aquatic habitat protection, enhancement, or restoration benefits to be derived. (Note: North Santa Monica Bay Subregion did not have similar data so it shows Significant Ecological Areas instead <sup>5</sup> .)
Recreation: High Priority <sup>6</sup>	Shows areas that have the greatest need for open space recreation given the distance from current open space recreation sites.
Water Quality: Medium and High Priority <sup>7</sup>	Shows watershed areas with medium and high priority and therefore relative potential to improve surface water quality.

<sup>1</sup> Created using Los Angeles County's groundwater basins shapefile overlaid with soils and known forebays shapefiles

<sup>2</sup> Created by RMC Water and Environment for the Los Angeles Department of Water and Power's Recycled Water Master Planning program to show sources of wastewater that could be made available for recycled water use.

<sup>3</sup> Created by Federal Emergency Management Agency to define areas at high risk for flooding (subject to inundation by the 1% annual chance flood event) and where national floodplain management regulations must be enforced.

<sup>4</sup> From *Regional restoration goals for wetland resources in the Greater Los Angeles Drainage Area: A landscape-level comparison of recent historic and current conditions using GIS* (C. Rairdan, 1998) and additional current terrestrial aquatic habitat is based on the extent of current habitat derived from the National Wetlands Inventory.

<sup>5</sup> Significant Ecological Areas are those areas defined by Los Angeles County as having ecologically important land and water systems that support valuable habitat for plants and animals.

<sup>6</sup> Created for the *GLAC IRWM Open Space for Habitat and Recreation Plan (2012)*, and shows where there is less than one acre of park or recreation area per one thousand residents.

<sup>7</sup> Created for the *GLAC IRWM Surface Water Quality Targets TM (2012)*, which ranked catchments based on TMDLs, 303(d) listings and catchments that drain into Areas of Special Biological Significance (ASBS).

## 4.2 Integration Opportunities in Lower Los Angeles and San Gabriel Subregion

Based upon Figure 15, the Lower Los Angeles and San Gabriel Watersheds Subregion is notable relative to other subregions in a few ways:

- There is a relatively high need for recreational open space in three different areas.
- There are critical recharge areas for the Central Basin in the upper Subregion while the majority of pumping is done in the southern portion of the basin.

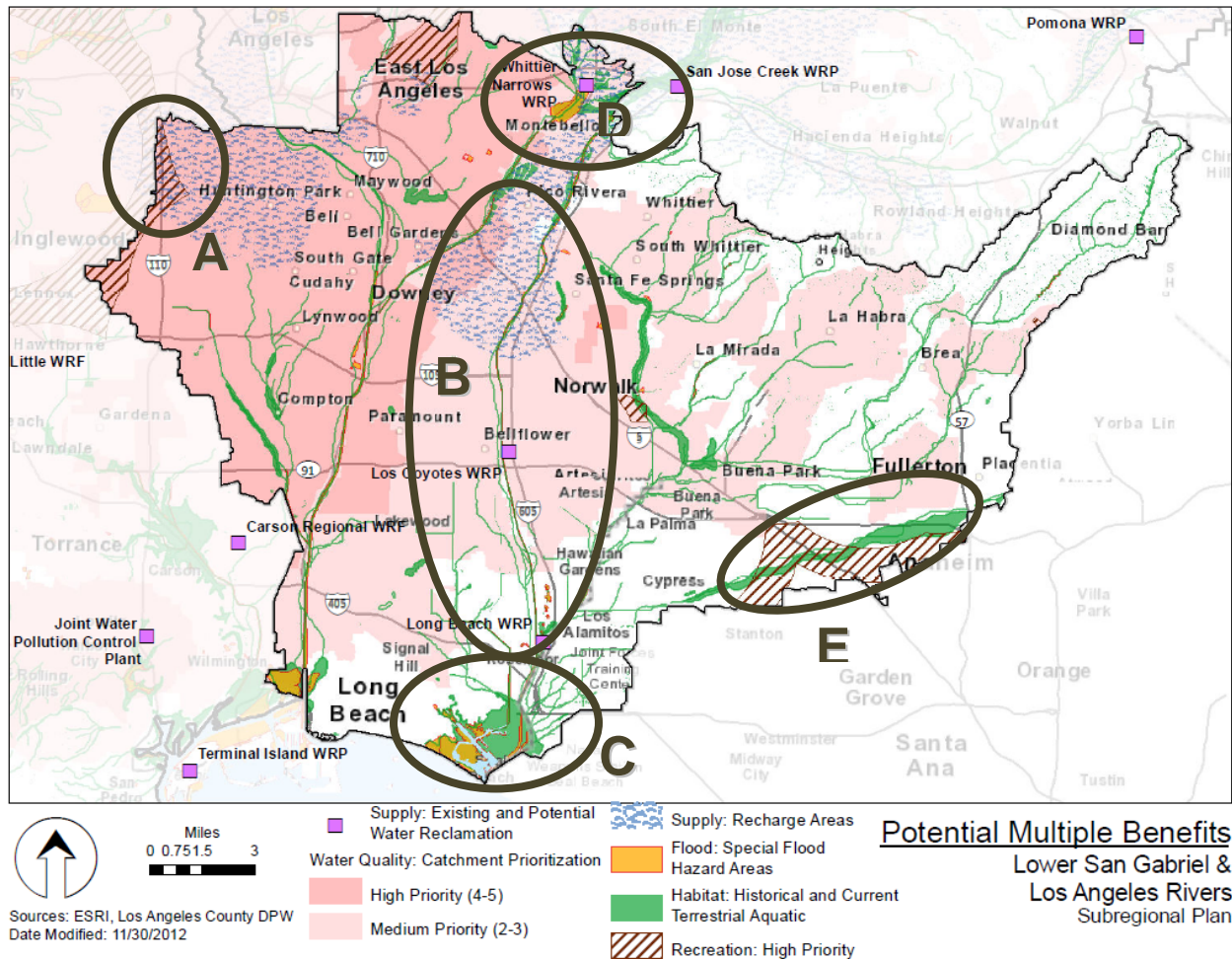


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- The eastern portion of the Subregion has high priority drainage areas for water quality improvements that also overlap some of the recharge areas.
- There are coastal areas that could provide both flood control and habitat benefits.
- There are several sources of recycled water supply that could be further utilized as local supply.

The following sections highlight a few areas in the Los Angeles and San Gabriel Subregion where integration and partnership opportunities could be found based upon the Geodatabase layers and multiple benefit analysis performed.

**Figure 15: Lower Los Angeles & San Gabriel Subregion Potential Multiple-Benefits**



## **A: South Central Los Angeles Area Recreation, Recharge, Stormwater Quality Benefits**

There are areas with the potential for groundwater recharge in the northwestern area of the subwatershed (South Central Los Angeles) above the Central Basin. Additionally, there are park-poor areas which also overlay high priority stormwater management catch basins. These recharge areas predominately lie within high priority areas for water quality improvements. Given that this area is heavily urbanized, it would be well suited for decentralized stormwater capture and use projects as well as infiltration BMP's that could achieve water quality and groundwater water supply benefits. Because it is park-poor, finding locations that can be transferred from industrial use to parkland with infiltration for stormwater (where

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industrial areas border residential areas) shows promise. Care would need to be taken in the heavily industrialized areas that soils are not contaminated before infiltration is encouraged here.

Partnerships between WRD, Central Basin MWD and the City of Los Angeles, and cities such as Vernon and Huntington Park as well as unincorporated Los Angeles County could result in integrated projects.

## **B. Central Basin Recharge and Pumping**

The majority of pumping needs are in the southern more heavily urbanized portion of the Subregion, however replenishment is conducted at the northern forebay recharge facilities. Although there are both underutilized recycled water and stormwater supplies available, the ability to infiltrate more supply is limited by the rapidity at which supplies can be pumped to ensure that mounding does not become an impact. pumping in closer proximity to the recharge. Partnership projects that would seek to create a recharge and pumping balance could be explored between the southern Central Basin pumpers and the WRD.

## **C. Lower San Gabriel River Watershed and Seal Beach Habitat Improvements and Flood**

The mouth of the San Gabriel River provides opportunities for integrated project development that could result in achieving habitat and flood control benefits. Integrated flood management projects would become even more beneficial as a way to adapt to sea level rise as a result of climate change. Partnership opportunities exist between LACFCD, the City of Long Beach and the City of Seal Beach.

## **D. Intra-Regional Montebello Forebay Recharge and Open Space**

The San Gabriel River Valley narrows in the Montebello area which also provides the dividing line between the Upper San Gabriel and Rio Hondo Subregion and the Lower Los Angeles and San Gabriel Subregion. This area is also the main recharge Forebay for the Central Basin where several spreading ground facilities are located. Although somewhat urbanized relative to other densities in the Region, this area also provides a great deal of open space given those facilities. Preserving and further enhancing the spreading capacity is critical to meeting supply goals, as well as water quality goals. Increased stormwater infiltration will lessen the amount of contaminants able to be transported further down stream. If there are projects that could also incorporate both habitat and recreation elements without compromising these primary functions, there is the potential for achieving further integrated and beneficial results.

Recycled water supplies in this area could be further maximized for increased recharge and supply benefits. Partnerships with WRD, LACSD, LACFCD, Central Basin MWD, Central Basin pumpers and overlying cities that could benefit from above ground open space.

## **E. Anaheim and Fullerton Recreational and Habitat Open Space**

There is a significant band of priority area for recreational open space in this swath of Orange County overlapping a wetlands and habitat area. Water supply or quality projects in this area could be developed to include both recreation and habitat components to achieve those benefits. Partnership opportunities exist for the Mountains and Rivers Conservancy or similar conservancies in Orange County along with the Cities of Anaheim and Fullerton.