

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 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

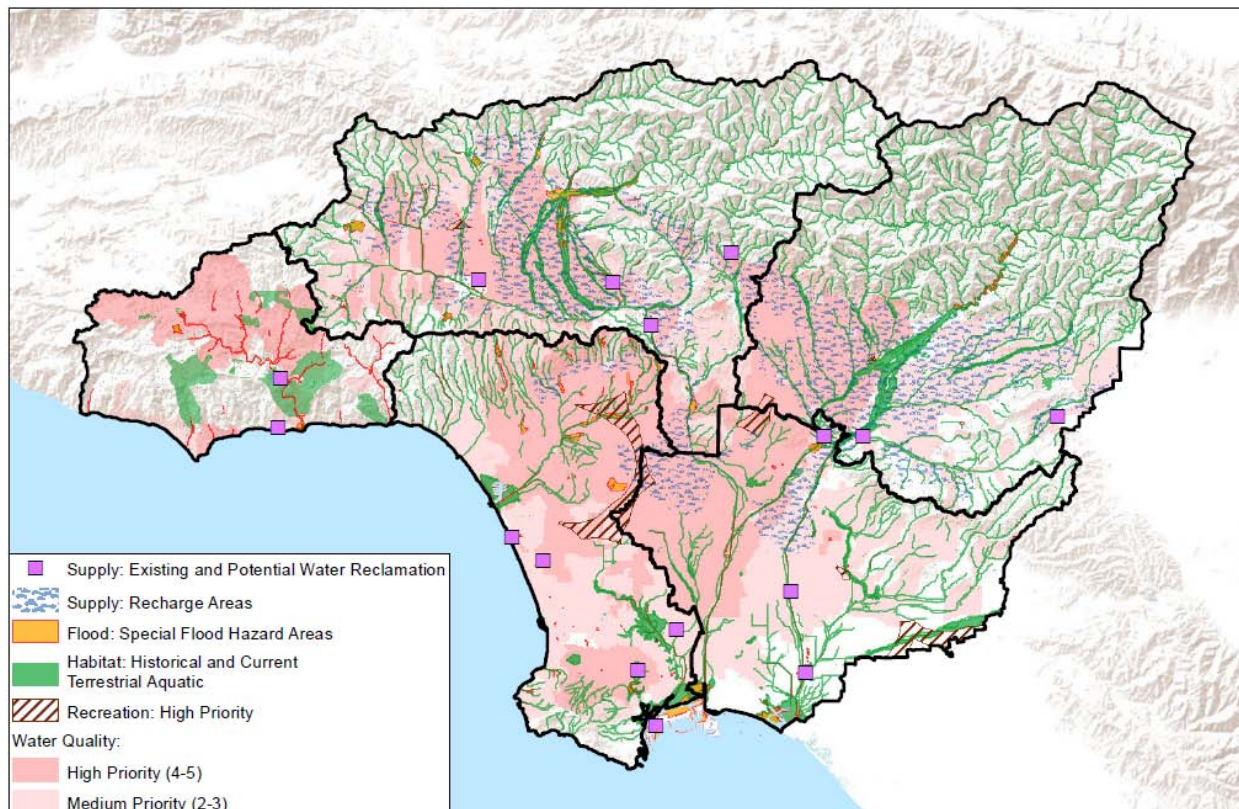
As part of the objectives and targets update process, the GLAC Region compiled and developed several geo-referenced data layers to assist in spatially identifying priorities and potential opportunities to achieve water supply, water quality, habitat, recreation and flood management benefits. These data 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 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 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.

Table 11: Potential Benefit Geodatabase Layers

Data Layer	Description
Supply: Recharge Areas ¹	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 ²	Shows locations of existing wastewater and water reclamation plants.
Flood: Special Flood Hazard Areas ³	Shows some of the areas that would benefit from increased drainage to alleviate flooding potential.
Habitat: Historical and Current Terrestrial Aquatic ⁴	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 ⁵ .)
Recreation: High Priority ⁶	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 ⁷	Shows watershed areas with medium and high priority and therefore relative potential to improve surface water quality.

¹ Created using Los Angeles County’s groundwater basins shapefile overlaid with soils and known forebays shapefiles

² 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.

³ 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

⁴ 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.

⁵ 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.

⁶ 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.

⁷ 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 South Bay Integration and Partnership Opportunities

Planning for the GLAC Region is primarily done on a subregional level, given that each subregion has a unique set of physical opportunities and stakeholders that create opportunities for project identification and collaboration. Therefore, the Geodatabase layers are more useful when examined and discussed on a subregional scale. Figure 14 focuses on the South Bay Subregion and highlights just a few unique areas within the subregion that have potential for generating multiple benefit projects. These areas described here are meant to provide examples of potential multiple benefits areas and are not meant to be a comprehensive inventory of opportunities.

The South Bay Subregion’s integration potential is notable relative to other subregions in a few ways:

- There are minimal areas suitable for groundwater recharge.
- It has the largest area in need for open space recreation.
- It has great potential for coastal habitat preservation, enhancement and restoration.
- There are significant areas with a high priority water quality improvement potential.

What is not obvious from Figure 15, is that relative to other subregions, the South Bay is heavily dependent upon imported water supplies given limited groundwater recharge potential. Therefore local supply development anywhere within the Subregion would be considered to provide great benefits.

The following paragraphs describe a the circled areas in Figure 15 where integration and partnership opportunities could be found based upon the Geodatabase layers and multiple benefit analysis performed. There are multiple areas beyond those few highlighted here for further exploration by the South Bay Subregion stakeholders and project proponents.

A: Hollywood Basin Water Supply and Water Quality

Although limited, there are areas with the potential for groundwater recharge in the northern area of the subregion (Beverly Hills and Hollywood areas) that could recharge the Hollywood Groundwater Basin. These recharge areas also 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. Potential partnerships between LA County DPW, and the cities of Beverly Hills and West Hollywood and Los Angeles as well as several NGO's could result in multi-benefit projects.

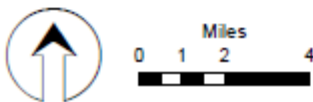
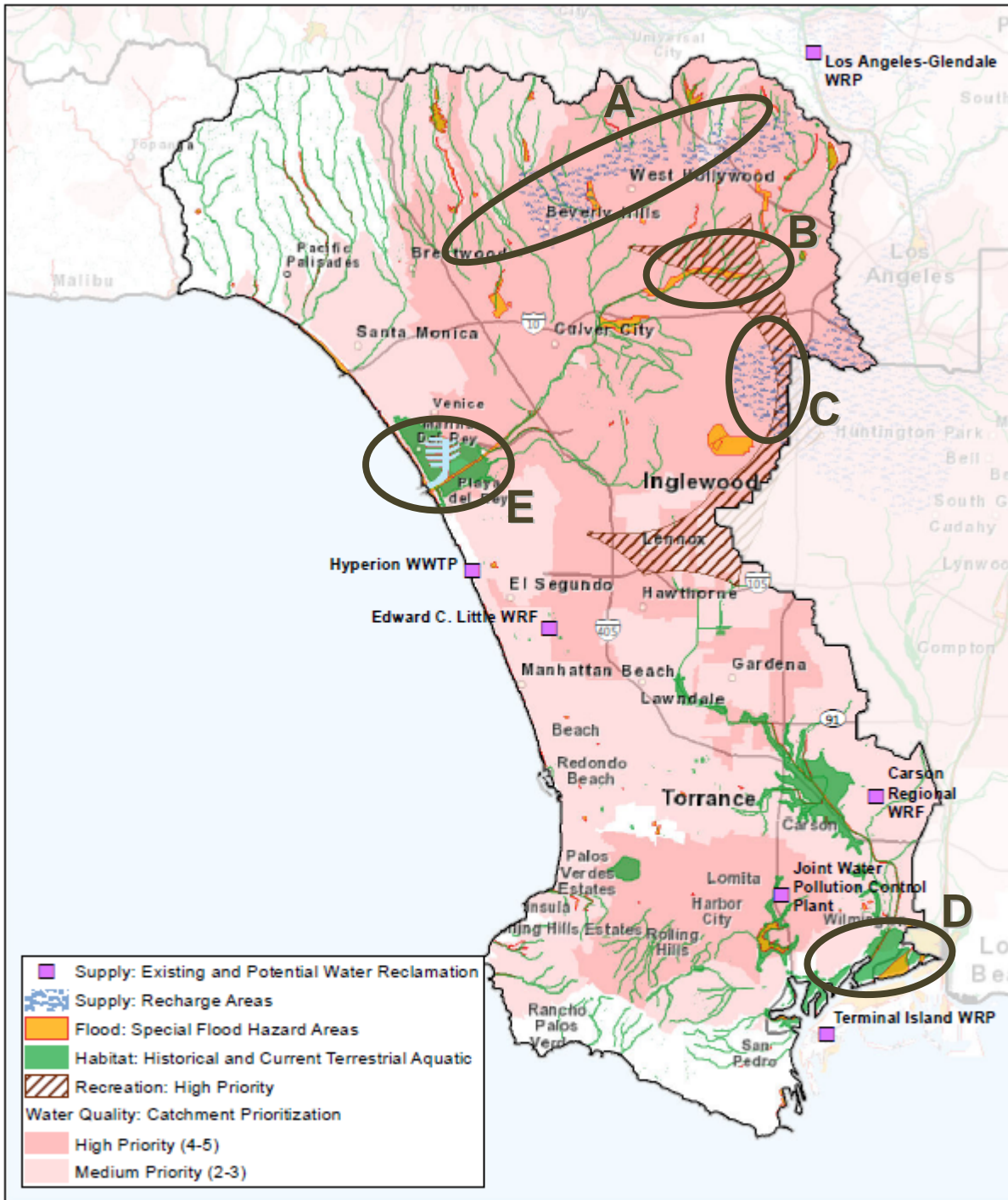
B. Mid City Los Angeles Water Quality, Flood Management Habitat and Recreation

Historically, this area was the upstream area of Ballona Creek but has since then become heavily urbanized. These unique characteristics provide an area with opportunities for both flood management and water quality improvements. The area's current urban density may limit the ability to provide habitat benefits however recreation opportunities could still be feasible in the area on a neighborhood scale. Projects could provide multiple benefits when coupled with water quality improvement components and flood management.

C. South Central Intra-subregional Groundwater Recharge, Recreation and Water Quality

The northern-most boundary between the South Bay and Lower Los Angeles and San Gabriel River subregions is South Central Los Angeles. This area has a high recharge potential and water quality improvement priority as well as a great need for open space recreation for the heavily urbanized neighborhoods. Therefore, this area has great potential for generating integrated projects that could provide benefits to both subregions. Projects could include stormwater landscaping BMPs on a site (yard) and neighborhood (park) scale to capture and infiltrate strowmwater flows in open areas. Close proximity to regional water reclamation plants can also provide additional supplies to further enhance current use of recycled water for groundwater recharge. Project partners could be WBMWD, WRD and the City of Los Angeles.

Figure 15: South Bay Subregion Potential Multiple-Benefits



Sources: ESRI, Los Angeles County DPW
Date Modified: 11/28/2012

Potential Multiple-Benefits
South Bay
Subregional Plan

D. Dominguez Channel Flood Management, Water Supply and Coast Habitat

Another area for potential intra-subregional project with Lower Los Angeles and San Gabriel Subregion is at the mouth of the Dominguez Channel. The area also houses the City of Los Angeles Terminal Island Water Reclamation Plant that could supply recycled water supplies for potable offset for agencies in both subregions though their joint involvement in the Central Basin. Although heavily industrial, there is potential for habitat benefits if such a project were conceived that could also improve the flood management needed in the area. Partnerships between the cities of Los Angeles, Carson, Long Beach, WRD and WBMWD could result in integrated projects.

E. Marina del Rey Water Quality and Coastal Habitat

The Ballona Creek empties into the Santa Monica Bay at Marina del Rey. This coastal area is home to the Ballona Wetlands that are in the process of being restored through past and future new projects that will further increase its habitat and water quality value and benefits. The presence of Ballona Channel (a stream and flood control channel) also provides opportunities for the management of flood waters and coastal inundation as a result of climate change. There are also opportunities for added freshwater wetland treatment upstream of the salt marsh areas that could incorporate passive activity trails.

Potential project partners are the State Fish and Game, the Coastal Conservancy, and the Santa Monica Bay Restoration Commission, along with the LACFCD, non-profit groups (such as the Friends of Ballona Wetlands and Ballona Creek Renaissance) and cities of Los Angeles and Culver City.

The Oxford Flood Control Basin manages stormwater flows into Marina del Rey. While it is principally a flood control basin, it has potential for stormwater quality management and habitat restoration as well with potential partners including LACFCD and County Beaches and Harbors.

Venice Canals and Ballona Lagoon areas also provide opportunities for low impact development to minimize flooding and enhance water quality and open space habitat for the City of Los Angeles and local neighbors and environmental groups.