

**SEPULVEDA BASIN  
WILDLIFE AREA  
CONCEPTUAL MASTER PLAN  
DESIGN NARRATIVE**



Prepared for:

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## INTRODUCTION

The Sepulveda Basin is located within the city limits of Los Angeles, California, in the San Fernando Valley. The 2,150 acres of public land located within the basin is administered by the U.S. Army Corps of Engineers (Corps), but a majority of the land is leased to the City of Los Angeles, Department of Recreation and Parks (DRP) for recreation and park use. Of this total, 108 acres has been designated as the Wildlife Management Area.

The Conceptual Master Plan outlines the future development of the Wildlife Area. This includes passive recreation improvements and habitat revegetation. The Design Narrative documents the planning and design process used to develop recommendations for recreational and plant community development of the Wildlife Area. The process includes setting goals, analyzing the physical conditions and previous studies of the Wildlife Area, and identifying public interests. Based on these factors, alternate concept plans were prepared.

A major factor in the development of the alternate concepts was the Conceptual Management Plan prepared by the Chambers Group in March, 1994. This plan analyzed the biological resources of the site and recommended increasing the diversity of habitats and species found in the Wildlife area. A detailed plant list and a conceptual planting plan were included in the recommendations. Following preparation of the alternatives, a review meeting was held with representatives of the Corps and the City of Los Angeles DRP. A consensus was reached regarding the general direction of the Conceptual Master Plan.

A Draft Conceptual Master Plan was prepared and presented at a public meeting. Based on public comments, management considerations, and construction costs, a final plan was developed. The final plan was presented to the Wildlife Steering Committee with final approval by the Corps and the City.

## GOALS

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The following goals were developed to guide the planning of the Wildlife Area.

- Increase the diversity of habitat and species throughout the Wildlife Area to include local birds and other wildlife.
- Maintain the species focus on waterfowl.
- Improve the passive recreation experiences for all age groups and levels of knowledge such that they are compatible with the wildlife and habitat.
- Focus improvements on sustainable design principles.
- Provide an interactive interpretative program which will increase public understanding and knowledge of the Wildlife Area, habitat, and species.
- Provide a significant, barrier-free recreation/education experience for visitors (meeting ADA goals/guidelines).



## SITE ANALYSIS

The Wildlife Area is located within the Sepulveda Basin, south of the Tillman Water Reclamation Plant (TWRP), west of the San Diego Freeway, and north of the 101 Freeway. The western boundary is formed by the Los Angeles River and the model airplane flying area. The area is divided into three sections by Burbank Boulevard which runs east-west through the site, and Woodley Avenue which runs north and south. This separation is a major constraint to the opportunity to develop three areas with habitat diversity and continuity as well as safe pedestrian access between the three parcels.

For reference in this report, the three areas will be referred to as Area A (Woodley Avenue to Channel), Area B (area west of Woodley Avenue), Area C (area south of Burbank Boulevard), and Area D (the existing lake area and staging area).

### Existing Improvements

A variety of improvements have been made to the Wildlife Area over time. Area D is the most heavily developed area for passive recreation, and Area C has the greatest amount of mature vegetation. Area A parcel and Area B have been used as a sod farm and contain no recreation improvements.

On Area D, the lake, signage, viewing blinds were constructed and riparian vegetation planted in 1985. Since that time considerable additional planting has been undertaken. The plant materials are in various stages of maturity and provide an excellent beginning to the development of the wildlife area. Access to Area D is from Woodley Avenue and the shared entrance with Tillman Water Reclamation Project (TWRP) and Woodley Avenue Park. An existing parking lot at the terminus of this access road contains approximately 75 parking spaces. The parking lot is shared by users of a nearby archery range, proposed cricket fields, and open park areas. Additional parking may be required to accommodate automobiles and to provide for a bus turn-around and bus parking.

Located to the immediate north of the parking lot is a City of Los Angeles operated archery range. The facility includes a fenced in range, a comfort station, small covered areas for outdoor events and meetings, and a small parking lot. The area is accessed from the same entry road serving Area D. The potential exists to expand the Wildlife Area into this zone. The existing comfort station currently used by the archery facility could be expanded and shared. Widening of the existing access road and other minor improvements may also be required with this concept.

The site signage and viewing blinds will be redesigned following guidelines by the City and Corps. Improvement to each component will greatly improve and enhance the appearance and visitor experience. The sign program should be completely revised to incorporate an up-to-date interpretative program. The program should be focused towards the many school groups that use the park for environmental education. Other interpretative displays should be introduced as part of the overall communication program. The viewing blinds should also be situated to take advantage of the opportunities to view varying waterfowl habitat. The replacement blinds should explore alternative site locations for improving viewing and create an improved screening from the lake and shoreline.

No recreation improvements, other than joint maintenance/hiking trails, have been constructed for Areas B and C. Vehicular access and parking is provided to Area B via the model airplane site access drive. Parking is also provided at the terminus of this access road.

Areas C and D have a combination of hiking/maintenance trails. The Area D parcel trails begin at the entry road and provide access to four viewing areas located along the west side of the lake. This trail continues south and connects to Area C via a large box culvert under Burbank Boulevard. The Area C trail continues along the eastern perimeter of the parcel and stops at Haskell Channel. Additional trails are located adjacent to the Haskell Channel to the point the channel connects with the Los Angeles River and on the west side of the channel. Unauthorized temporary crossings are constructed by park users to provide access to the west side. These crossings are maintenance problems and a permanent bridge will be evaluated. No trails have been provided for Area B.



The existing trails are constructed of decomposed granite which is appropriate for the natural character of the Wilderness Area. The trails do require some repair after periods of flooding. High-use and specialty areas could explore the use of a different trail material in order to reduce maintenance and identify an areas special character.

### Topography

All four parcels are generally flat. A minimum slope of .5% provides drainage in a southerly direction towards the dam. Within Area D drainage is directed to the 10-acre lake or Haskell Channel. A slight increase in elevation occurs at the sites northern most point, near the existing parking. Elevations appear to be approximately fifteen feet higher than the lake. This raised area is less subject to frequent flooding and should be the site of the more permanent facilities.

From this higher elevation and in many location throughout the site, long views are possible. Views of off-site hi-rise office buildings occur to the east and south of the site and negatively impact the natural character of the wilderness area. These views should be screened whenever possible to reduce their visual impact.

### Hydrology

The entire site is within the 50 - year floodplain and is subject to occasional flooding.

A 10-acre man-made lake in Area D provides both an important habitat and visual amenity. In addition, the lake features a one-acre island to provide a secure waterfowl refuge. The freshwater lake is supplied with advanced secondary treated reclaimed water from the TWRP. The lake has a normal water surface elevation of 684.0 feet which is controlled by an adjustable weir located on its downstream end. The maximum depth is 5.5 feet, providing a volume of 40 acre-feet (13 million gallons). To ensure high - quality lake water, at all times, a continuous supply of reclaimed water replaces lake water approximately every three days. The maximum normal supply is 6.5 MGD, but this may be adjusted based on seasonal conditions and operating experience. The City of Los Angeles is responsible for managing lake operations. Current

regulations and permits prevent any alteration to the operation, shoreline, access to the island, or contact with the lake. (See Sepulveda Basin Recreation Area Wildlife Area Management Plan for more detailed information about operations).

The lake provides excellent viewing and habitat opportunities. Existing blinds are major attractions. Improving the viewing experience from these blinds and identifying additional interpretative opportunities related to the lake, should be explored.

Haskell Channel flows through the site providing additional habitat opportunities and, at the same time, constraints to circulation. Haskell Channel handles the daily flow from the TWRP (1.8 MGD September to May except when lake maintenance occurs, increasing the flow to 3.3 MGD) and storm water runoff from the watershed. The banks are somewhat eroded and despite attempts to plant riparian vegetation along the channel, it's upper portions are still unattractive. Currently, the channel bottom and banks are unstable during large flood periods because of stream configuration and soils. Regrading the banks to allow access in certain areas and continuing the planting program will be a high priority. Widening the channel bottom to provide larger areas for riparian plantings should also be explored.

In Area C and the creek provides a very positive visitor experience and excellent habitat for wildlife with its mature vegetation.

### Vegetation

Vegetation along portions of the east-side of Haskell Channel includes dense riparian stands of cottonwoods and willows with adjacent stands of mulefat. The west side of the channel is vegetated with weedy species. Intermittent emergent vegetation exists in the channel. The wildlife lake east of Haskell Channel and north of Burbank Boulevard supports few riparian species and is ringed with wild rhubarb. The lake presently supports no emergent vegetation and no submerged vascular plants. The vegetation between the lake and Haskell Channel has been planted and includes cottonwoods, willows, golden currant, and wild rose.



The area east of the lake and extending to Burbank Boulevard contains ruderal species, including mustard, annual grasses, Russian thistle, and some mulefat. The open grasslands east of the lake provides forage for great egrets, snowy egret, Canada geese, and several raptor species, including American kestrel, and Cooper's hawk. At the south end of the pond is an ephemeral wetland that presently supports mustard and grasses, but few cattails or other marsh plants.

Revegetation has been initiated along the slopes north and south of Burbank Boulevard, and plantings include oaks, sugar bush, laurel sumac, fuchsia-flowering gooseberry, California sagebrush, and other coastal sage scrub components.

Area C contains a small pond that has been surrounded with planted ash, bay laurel, and willows. Large stands of mulefat and broom also occur. Approaching the southern part of the dam, annual grasses, and cocklebur comprise a major component of the vegetation. The areas adjacent to the Los Angeles River are either devoid of vegetation or are densely vegetated with cocklebur, conditions likely caused by flooding in these areas.

The riparian zones along both sides of the Haskell Channel have dense willow and mulefat vegetation. When not planted in sod, the west Woodley parcel is barren except for tumble weeds.

Design Concept

The design concept is to improve the variety of wildlife habitat and passive recreational experiences within the Wildlife Area by increasing the diversity of habitat, species, and interaction opportunities. All improvements should focus on the principles of sustainable design.

Area A would be planted with grasslands and alluvial sage scrub.

Area B would be planted and a new trail would provide access and viewing opportunities along the parcels southern and western border.

Area C would receive renovated trails, a new crossing at the southern end of Haskell Channel, and a limited amount additional plantings.

Area D would continue to be the focus of the Wildlife Area and passive recreation activity. Anchored by the lake, a staging area would include a Comfort Station/Shelter and become the focus for orientation, lectures, and changing exhibits. A wide variety of new trails and trail experiences including a raised trail, reconstructed viewing blinds, new viewing areas, a marsh walk, interpretative signing and exhibits, and additional planting would complete the development of the parcel.

The overall landscape concept attempts to visually connect the three separate parcels together. This will be achieved by continuing massing plant communities across the roads, bring the plant material as close to the road edge as possible. In this way, the visual aspect of the road will be decreased and the planting increased.



## Staging Area

The Staging area would be located on the far northern portion of the site immediately adjacent to the archery range. The existing comfort station would be expanded and renovated for shared use by both areas. A separate classroom/storage building with covered seating, a small amphitheater, picnic areas, and display areas with interpretative signing and exhibits would be provided. The classroom/storage building would be approximately 600 square feet. The building would also be designed to resemble a birdhouse. The existing Comfort Station renovation would also follow a similar exterior treatment.

The plaza surrounding the structure would be paved in stone or colored concrete depending on budget constraints. Adjacent to the structure would be a 60-75 person amphitheater built into the natural slope. The amphitheater would be constructed of stone walls and seating areas with turf panels.

A raised walkway, constructed of metal, would originate at the plaza and continue in a southwesterly direction towards the lake, extending approximately 300 feet. The walkway would maintain a grade level to the plaza and therefore at it's southern terminus be approximately ten to fifteen feet above grade. Interpretative exhibits identifying the features and locations of the Pacific-flyway would be included along the walkway. A second walk, at grade, would connect the plaza to an overlook located on top of the dam and to the main trail system along the lake. Together, the two walks represent birds in flight.

The area between these two walks would be planted in grassland creating a dramatic and open view to the existing lake. California and Valley Oaks would be planted on the hill and adjoining valleys thereby emphasizing the grasslands and bird formation form.

The existing parking areas would be removed and the access road realigned and widened to better serve the site. A new parking lot consisting of approximately 90 parking spaces would be constructed. Grass-crete or another impervious paving material would be used in the new parking areas.

## Landscape Revegetation

The vegetation plan generally follows the recommendations contained in the Conceptual Management Plan prepared for the Wildlife Area. In order to meet the requirements for waterfowl/multi-species habitat the plan recommended the creation of a variety of habitats. Five distinct communities would be created or enhanced.

- grasslands
- riparian woodland
- alluvial sage scrub
- mesic scrub
- oak woodland

These habitats will enhance the ability to attract migratory and resident waterfowl, migratory and passerine birds, raptor species, amphibians, and invertebrates.

Native grasslands would be planted in three separate areas. In Area B immediately adjacent to Woodley Avenue and in Area D to the east of the lake. By planting the grasslands on both sides of Woodley, and in the center median, the visual impact of Woodley Avenue will be reduced. The grasslands in Area B will be compatible with the needs of the model airplane users.

The grassland species mix would include native grasses and windflowers selected for their wildlife forage capabilities. The plantings would provide a seasonal food source for migrating waterfowl as well as habitat for the year-round wildlife residents. Windflowers would be included to add color to the mix during early spring. Reseeding of the windflowers may be needed on a multi-annual basis (every 3 to 5 years) to assure continued blooming.

Riparian woodland areas would be expanded adjacent to Haskell Channel. The channel would be widened and two wire structures constructed to create two areas that could be inundated with water. The new channel would provide viewing areas and opportunities to access the riparian



plantings. Riparian plantings will also be expanded on the southeast and northeast sides of the existing lake.

Riparian plantings in three areas would be divided into 3 groupings by plant height, under story, mid canopy and upper canopy. The under story plantings provide dense cover and reach a height of 4 feet. Mid-canopy vegetation will reach an ultimate height of 20 to 35 feet. The Conceptual management plan suggested planting a California walnut grove within this zone, a habitat becoming rare in Southern California. The upper canopy which reaches heights of 40-45 feet, provides shade and cover for plants and animals. The riparian community will be established with both container plants and seeds.

Alluvial sage scrub habitats are located in areas subject to more periodic flooding. Habitats are proposed in Areas A, B, and D between the proposed grasslands and riparian/mesic habitats. Many of the alluvial sage plants in the scrub habitat will provide forage for birds and mammals. Other shrubs display colorful flowers during spring and summer, attracting insects and birds.

Mesic scrub habitats are proposed for the west bank of Haskell Channel and south of Burbank Boulevard in Area C. The mesic scrub habitat has a low, dense growth form and provides good food sources for birds and small mammals.

Oak Woodland habitat would be created on the higher elevations located north of the existing lake and on the slopes and valleys located between the Wildlife Area and Woodley Avenue Park. This habitat would continue in a westerly direction crossing into both Areas A and B.

See Conceptual Management Plan for proposed Plant Lists.

### Trails

The trail system would be expanded to begin the visitor experience at the parking areas and to provide a variety of barrier free trail experiences. A new raised trail (8 feet wide and approximately 12 inches above existing grade) is proposed for the west side of the new Haskell

Channel riparian area in Area A. The raised trail would be constructed from recycled plastic material in order to better withstand flooding. The new raised trail would be connected to the viewing blinds located along the lake. The user would experience three different habitats, riparian, alluvial scrub, and mesic scrub when using the trail. Use of the existing trail, located between the channel and the lake, would be restricted to maintenance vehicles. Special resting/viewing areas would be constructed along the proposed trail. Special signing and exhibits would also occur at these points. A second section of raised trail would be constructed at the southern end of the lake over the ephemeral wetland area. This trail would provide access to wetland habitat and provide the only area where water access was possible.

A new decomposed granite loop trail would be constructed in Area A. This trail will provide exposure to the grassland habitat and access to Area B. A trail would be constructed along the southern and western perimeters of Area A. This trail would connect to the existing Comfort Station that serves the Model Airplane Club and then continues north to ultimately connect to Woodley Avenue. Further analysis will be required to determine if a marked crosswalk can be installed to loop the trail back into the Wildlife Area. Two viewing areas would be constructed along the trail.

The existing trails in Area C would continue to be used. The trails would be cleaned up and additional decomposed granite added. A bridge, over Haskell Channel, would be constructed in near the connection to the Los Angeles River. The bridge would provide a permanent connection between the east and west side of the parcel. An on-grade crossing is also proposed at the intersection of Burbank Boulevard and Woodley Avenue. Coordination of this crossing will be required with the City and CALTRANS.

### **Signage and Interpretative Displays**

A series of new entry, identification, and interpretative signs and displays would be introduced throughout the Wildlife Area. The details of the program still need to be worked out with representatives of the City, and the Corps, and interested environmental group representatives. The concept for the program is to provide educational and interactive displays targeted to the



school groups that use the area for environmental education. The signs and exhibits would be interesting to other visitors as well, but would be oriented to the environmental education of children ages eight through twelve.

The signs would be constructed of porcelain enamel panels that will withstand periods of flooding and inundation. The other exhibits and displays would be constructed of concrete or metal. For example, a tall concrete column would be marked with the elevations of the various floods in the basin. The markings would identify the year, elevation, and magnitude of the storm (i.e., 50 year). Other exhibits would focus on the type of birds and waterfowl - where they originate from and migrate to - the use of plants as habitat, the relationship between plants and soil, and moisture conditions. Each of the four gardens in the Staging area would also be signed to explain the garden concept and identify the individual plant species.

### Irrigation

Although native plantings are proposed throughout the Wildlife Area, it is anticipated that temporary supplemental irrigation may be required in most areas to ensure successful revegetation. A permanent automatic irrigation system will be used in the staging area. Actual definition and refinement of the proposed irrigation system will be done in the design phase, once a soil study is conducted and actual species lists are developed.

The preliminary concept is that irrigation can be used advantageously in riparian areas (mesic scrub and riparian woodland areas) for establishment. In addition, at this preliminary stage irrigation in upland areas (alluvial sage scrub, chaparral, and grassland areas) can be used if a shortfall in precipitation is anticipated. It is likely that a temporary automatic agricultural type irrigation system will be used for grassland areas. Water requirements should be minimal but the system will allow for revegetation establishment in case of drought.

### Further Analysis Required Prior to Design

Generalized soils on site are comprised of alluvium made up of clays, silts, silty sands, and some gravel. Some soil compaction is apparent on site, presumably from dam construction and debris removal.

A thorough soil analysis from each area to be revegetated should be conducted. Tests should be performed on as many different on site areas as economically feasible in order to understand the natural conditions.

Factors to be evaluated include the following: pH, permeability, texture, compaction (by bulk density), saline or toxic contamination, and nutrient levels. Micronutrients, including zinc, manganese, iron, and copper, should also be evaluated. Although micronutrients are found in small quantities in soils, these nutrients are essential for plant function and growth.

Information on groundwater availability is not complete over the entire basin. However, depth to groundwater is reported to range from approximately 15 to 130 feet (Corps 1987). The surface water in the Wildlife Management Area from the wildlife lake, pond, as well as Haskell Creek most likely provides some lateral infiltration of water along their boundaries. Borings should be drilled to assess soil saturation zones from these sources to determine the width of the area suitable for revegetation with riparian species and provide information relative to the design of planting pits and irrigation.



## ESTIMATED CONSTRUCTION SCHEDULE

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Implementation of the plan will be based on the development of final cost estimates. Construction may be required in two or three phases. Final determination of phasing will be completed after construction cost estimates are completed. The proposed improvements should be constructed in two different cycles in order to provide adequate habitat area for existing wildlife while existing areas are being disturbed. Trails and signage would be constructed as part of the revegetation of each area.

The first phase would include construction of the complete Staging area including parking and all features, riparian, and mesic scrub areas in the Lake parcel, and the Haskell channel improvement. The area west of Haskell Channel would be temporarily planted with a high nutritional crop, such as corn or sorghum, that will provide an important food source for waterfowl that may be temporarily displaced by construction activity around the lake.

The second phase would include the revegetation of the dam and west Woodley parcels, and the area east of the lake planted with agricultural crops during phase one. Riparian and mesic areas planted in phase one should be monitored, and any required replanting would be undertaken.

Depending upon the number and length of periods of inundation, the maturation rates of the different species can be predicted. With vigilant weed control, grassland areas should mature within three to five years. Riparian and mesic scrub habitats should be established in four to five years. The upland habitats will be the slowest to mature, expecting to take seven to eight years to reach maturity.