Silver Lake Reservoir Habitat Park

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1. Background	4
2. Site Analysis	6
3. Statement of Design	
4. Program Elements	
5. Concept Diagrams	
6. Proposed SIte Plan	
7. Plan Enlargements	
8. Section Detail	
9. Perspective Views	
10. Planting	



BACKGROUND

Site History

The Silver Lake and Ivanhoe reservoirs have over 100 years of history as water supply and public park area in the Los Angeles community. Before development, the reservoir area was a natural marsh, fed by the Los Angeles River. Ivanhoe reservoir was built first in 1906 by community developer Hugo Reid, a Scottish-Mexican immigrant, the area he named 'Ivanhoe' was said to have reminded him of the verdant Scottish highlands.

The Silver Lake Reservoir was built in 1908, as a backup supply to the main Los Angeles water source, the Owens Valley aqueduct, if it should fail. The reservoir could supply its population with up to 3 weeks of water. It was engineered by William Mulholland using innovative construction techniques for the time; it was named after politician and Water Board comissioner Herman Silver, lending the surrounding neighborhood its namesake as well.

Shortly afer construction of the reservoir, plans emerged to connect it to a great public parkway running from Wilshire Blvd., and develop the area around the reservoir into a public space. A grove of Eucalyptus trees were planted as part of this effort, some of which still exist today. Unfortunately Herman Silver passed away in 1913, and development of the park stopped in 1918 due to lack of funds.





In the year 2000 the area around the Silver Lake and Ivanhoe reservoirs was reconsidered for a public space improvement project, and a new masterplan was developed. However, in 2007 after these plans had begun their initial implementation schedule, the water from the reservoirs was found to contain toxic, cancer-causing bromate (a combination of naturally ocurring bromides, chlorine and sunlight). The resuls is that both reservoirs were drained; the Ivanhoe reservoir was filled with shade balls to prevent sunlight from interacting with water; silver lake reservoir was closed off from the water system and decomissioned.

The transition from potable water source, to a body of water than offered no utility and is now burdensome to keep filled via the city's water supply, commanded an entirely new approach to the reservoirs themselves and opened up opportunity to reconsider the masterplan. As of 2020 (present day) a new and improved masterplan is in the final stages of approval and ushers in a new and exciting era for the Silver Lake reservoir, and surrounding community.

BACKGROUND

The Need For a Redesign

What should and will happen to the Silver Lake Reservoir public spaces in the future is a subject of great debate; while some residents openly reject any kind of change, it is clear from an environmental and human factors standpoint that change is necessary and forthcoming.

Some of the myriad opportunities that have been publicly presented:

- Improved safety for visitors
- New recreation and amenities
- Habitat creation
- Community connection
- \cdot Water treatment
- Increased public space
- Entertainment zones
- Education opportunities
- Conservation

This design proposal, **The Silver Lake Reservoir Habitat Park** will address some of these factors in a unique way from the currently progressing masterplan.



Years of varying and contentious community input, Environmental concerns and master plan development have created a long list of concerns from the public. We have put together a matrix to help reconcile the voices of the community with design opportunities for the reservoir complex.

Community Input - Opportunity Matrix

DESIGN OPPORTUNITIES

Water's Edge Redesign Improved Active Paths Reservoir Maintained South Dam Removed Interpretive Signage **Historic Monuments** Improved Bus Stops Observation Towers Stormwater Outlets Pet Waste Stations Safe Access Points Improved Meadow Improved Lighting Education Center Native Plantings Secluded Grove Habitat Islands Amphitheater Nature Paths Parking Lots Picnic Areas Bathrooms Rec Center Esplanade Waterfall



COMMUNTY COMMENT OR CONCERN

How can we improve the safety and overall experience of the existing active path, park entrances and perimeter?

- Improved lighting
- Improved bus stop
- Improved active paths

Community Input - Opportunity Matrix

DESIGN OPPORTUNITIES



Safe Edge Conditions



Slopes Less Than 5% Grade

Bike Lane

Legend









Existing Street Lighting

us Stops

Bus Route

Moderate Vehicle Traffic

Two- Way Bike Lanes in Street

Existing Lighting

Dangerous Edge Conditions



Dangerous Access Points



No Lighting



Fast Moving Traffic



Legend



Fast Moving Vehicle Traffic- Dangerous

No Street Lighting

Dangerous Access Points

Composites



Safe Edge Conditions Composite



Safe Edge Conditions Composite



Moving the active path away from dangerous traffic circulation, improving the lighting conditions in areas that are dark, and extending the path route to include a loop around Ivanhoe Reservoir improves both the safety of the path and visual interest of the route, as well as buffering the path from noise and pollution.

Proposed Active Path with Safety Improvements



- 1. Add Crosswalk for School Entrance
- 2. New Pedestrian Access Point
- 3. Wider Path with Lighting
- 4. New Active Path with Lighting
- 5. New Active Path with Lighting
- 6. Wider Path with Lighting
- 7. New Vehicular and Pedestrian Access Point with Traffic Light
- 8. Dangerous Access Point Eliminated
- 9. New Wider Bus Stop with Crosswalk
- 10. New Wider Bus Stop with Crosswalk
- 11. New widened Entrance with Crosswalk
- 12. Dangerous Access Point Eliminated
- 13. Active Path Widened and Moved Away from Road
- 14. Dangerous Access Point Eliminated
- 15. New Vehicular and Pedestrian Access Point with All Way Stop Signs
- 16. New Main Pedestrian Entrance to Park with Crosswalks

How can we create new ways for residents and visitors to enjoy the natural setting, whilst preserving the environment from misuse and overuse?

- Water's edge redesign
- Nature paths
- Observation towers

Community Input - Opportunity Matrix

DESIGN OPPORTUNITIES



COMMUNTY COMMENT OR CONCERN

Existing Reduced Traffic Noise and Green Space



Site Analysis: Greater Than 50' From Traffic Noise



Site Analysis: Existing Green Space



Site Analysis: Composite

Proposed Nature Trail and Green Space



How can we create unobtrusive parking opportunities for locals and visitors to safely access the park?

Strategically-placed parking lots

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Community Input - Opportunity Matrix

DESIGN OPPORTUNITIES



COMMUNTY COMMENT OR CONCERN

Existing Vehicular Access & Site Conditions



Site Analysis: Adjacent to Med Density Zoning



Site Analysis: Unprogrammed Turf Grass



Site Analysis: Composite



Site Analysis: Slopes Less Than 5% Grade



Site Analysis: Existing Vehicular Access

Proposed Public Vehicular Access Locations

Modest parking lots located near medium density areas and existing vehicular access points at a relatively level grade give locals and visitors more opportunity to visit the park and provide much needed ADA access.



How can we retain and enhance treasured views into the site while providing water-cleansing and retention, and undisturbed habitat for birds and wildlife?

Habitat Islands

Community Input - Opportunity Matrix

DESIGN OPPORTUNITIES



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Existing Views and Physiographic Features



Site Analysis: Views in

Site Analysis: Green Space



Site Analysis: Concrete Bottom



Existing Views and Physiographic Features



Site Analysis: Stormwater Outlets



Site Analysis: Surrounding Hilltops

Site Analysis: Composite



Habitat Islands in the proposed wetland reservoir reflect the existing physiography of the surrounding neighborhoods and the stormwater capture plan. Opening the South Dam enhances the Southern view into the site by creating an entirely new vista into the park.

Proposed Island Configuration



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How can we create centers for education and recreation that celebrate nature, arts and the history of the reservoir ?

- Nature Center
- Amphitheater
- Historical Museum

Community Input - Opportunity Matrix



DESIGN OPPORTUNITIES

COMMUNTY COMMENT OR CONCERN

Favorable Conditions for Structure Placement



Site Analysis: Adjacent to Med Density Zoning



Site Analysis: Unprogrammed Turf Grass



Site Analysis: Composite



Site Analysis: Slopes Less Than 5% Grade



Site Analysis: Existing Structures



Site Analysis: Existing Vehicle Access

Proposed Education and Arts Centers



Design Statement

The Future is Here

The decommissioning of the Silver Lake and Ivanhoe Reservoirs as sources of potable water has presented a rare opportunity to create a significant green space in the center of a massive urban area. In its current state, the area is defined by nearly 100 acres of inaccessible water space, partitioned by a massive chain link fence and encircled by an inconsistent walking/jogging path that is only moderately safe at best and harrowingly dangerous at worst. The native garden and 'Meadows' recreation areas on the East side of the reservoirs have been popular with local residents as a precious green space to exercise and relax, and the possibility of transforming the entire reservoir acreage into a recreation space has been at turns inspiring and controversial amongst Silver Lake's varied interest groups.

DKST's design proposal, **Habitat Park**, addresses the areas of need echoed throughout the Environmental Review process and development of the initial Master Plan, and seeks to synthesize the disparate concerns of the community with an environmentally and aesthetically thoughtful design solution, which includes the program elements we have identified as most relevant through our analysis.

Untouched Views vs Active Space

One particular area of concern amongst residents has been the preservation of the reservoir habitat areas as mostly untouched nature space. Another significant aspect of the community would like to see the space programmed with more recreational activities. To summarize, it is a conflict between those who want idyllic untouched views and those that want an engaging social environment in a natural setting. Additionally, the water source that filled the reservoirs no longer exists and maintaining the current water level would be an irresponsible indulgence in a growing urban environment susceptible to long periods of drought. Our design meets the desire to retain natural views and the need for more active space by creating a parklike habitat with limited recreational access. **Habitat Park** incorporates the current stormwater management proposal which would provide a significant water source for the reservoir area, and utilizes this stormwater to create a wetland 'reservoir' in the Silver Lake Reservoir basin. Reforming the edges of the basin provides more space for safer pathways and opening the South Dam of the reservoir creates new access and views into the **Habitat Park**.

A Cultural Monument Evolves

To honor the site as a Cultural Monument, we have retained Ivanhoe Reservoir as a **Reflecting Pool** with a bridge path and viewing platform. This **Reflecting Pool** serves as the storm water receptacle which then flows through to the wetland area. **The Bridge** both literally and figuratively connects the historic reservoir with the current need for environmental sustainability.

Embracing California's Native Habitat

Re-imagining a significant green space in southern California is a profound and precious opportunity to create native habitat and participate in our state's mandate for environmentally sustainable development and natural conservation. **Habitat Park** is a composite of native plants, from riparian species at the wetland water's edge to chaparral plants at the higher and drier elevations of the park. By retaining a significant portion of the water resource and adding plant life, **Habitat Park** will remain an avian sanctuary for both water and nesting birds. It is almost certain to become home to many other animal species native to California including beneficial bees and butterflies.

Educational Opportunities

By retaining key elements of the original reservoir development significant to the growth of Los Angeles and incorporating environmentally sustainable green space, **Habitat Park** is an educational opportunity for all ages. Our design includes an Education Center at the water's edge and various viewing platforms and bird blinds and observation towers so that visitors can learn more about Southern California's natural environment in the middle of the city. As well, the design retains some the original structures of the reservoirs, specifically the Meter House, the Chlorination Station and of course the Ivanhoe Reservoir.

Fitness for All!

Our design repurposes the popular fitness path as a designated running/fast walking exercise path that is wider more even and with safer transition areas. We have incorporated a nature path for those that want to stroll through nature or hike a challenging switchback trail. There are trail heads throughout the park and at the 2 new parking areas to provide ADA access. Boardwalks extending out into the wetland, give visitors a chance to get closer to the natural environment.

Proposed Program Elements:

- Habitat Islands & Marsh at Water's Edge
- Active Path Redesign
- Significant Green Space Addition with Native Plant Palette
- Nature Path & Wetland Boardwalk
- South Dam Redesign/New Entrance
- Wetland Biodiversity Education Center
- Ivanhoe Reservoir Reflecting Pool
- Ivanhoe/SilverLake Wetland Bridge
- Reflecting Pool Waterfall
- Reflecting Pool & Park Viewing Platforms
- Chaparral Amphitheater
- Expanded Meadows/Recreational Green Space
- Bird Observation Tower
- Additional Parking Areas
- East Entrance Redesign
- Improved West side Entrances
- Improved Signage























Concept Diagram #1: Floating Habitat Islands with Original Water Level



Concept Diagram #2: Lowered Water Level with Freshwater Wetland Islands

LEGEND



Green Space, Active Paths & Nature Paths



Wetlands



Ivanhoe Reflecting Pool



Wetland Spillway Water Feature

The Meadows ~ Active & Passive Recreation



Observation & Education



Amphitheater & Picnic Areas

New Vehicular Access

Parking



Illustrative Site Plan



Featured Program Elements



- 1. Habitat Islands & Marsh at Water's Edge
- 2. Active Path Redesign
- **3.** Significant Green Space Addition with Native Plant Palette
- **4.** Nature Path & Wetland Boardwalk
- **5.** South Dam Redesign/New Entrance
- **6.** Wetland Biodiversity Education Center
- 7. Ivanhoe Reservoir Reflecting Pool
- 8. Ivanhoe/SilverLake Wetland Bridge
- **9.** Reflecting Pool Waterfall
- **10.** Reflecting Pool & Park Viewing Platforms
- 11. Chaparral Amphitheater
- **12.** Expanded Meadows/Recreational Green Space
- 13. Bird Observation Tower
- 14. Additional Parking Areas
- **15.** East Entrance Redesign
- 16. Improved West side Entrances
- **17.** Improved Signage
- **18.** Historical Museum

Enlargement A

Islands, Amphitheater, Nature Paths, Boardwalk, Parking, Restrooms, Partial Expanded Meadow 'Meadow'





KEY PLAN

- 1. Habitat Islands & Marash at water's edge
- **2.** Fitness Path
- 3. Nature Path
- Boardwalk 4.
- **5.** Chaparral Amphitheater & Restrooms
- **6.** Additional Parking Areas
- Expanded Meadows/Recreation Green Space 7.
- 8. Historical Museum





Enlargement B

West side of lake: Bus Stop, Nature Trail, Fitness Path, Observation Deck



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- 1. Nature Trail
- **2.** Lookout Observation Deck
- **3.** Elevated Boardwalk
- 4. Existing green space with updated planting
- 5. Fitness Path
- 6. Bus Stop
- 7. Habitat Islands





Enlargement C

New Entrance with Nature Center, Nature Paths, Rec Center, Parking, Restrooms, Dog Park, New Vegetation, Native garden



- 1. Nature Trail
- 2. Dog Park (Existing)
- 3. Fitness Path
- **4.** Park Pedestrian Entrance
- **5.** Gateway Sculptures / Signage
- 6. Entrance to Nature Center
- 7. Nature Center Building
- 8. Native Gardens
- **9.** Subterranean viewing windows
- **10.** Observation Deck
- **11.** Terraced Picnic Platforms
- Recreation Center & Sports Facilities (existing)
- 13. Parking Lot
- 14. Nature Trail Grand Entance
- 15. Habitat Islands



KEY PLAN



SCALE: 1:100

Enlargement D

Ivanhoe Spillway, Esplanade, Viewing Platform, and new Exercise Path thrrough Field



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Section

Pedestrian Access: Street level sloping towards Nature Path & Boardwalk



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- 1. Street Level
- 2. Fitness Path
- **3.** Planted Hillside: combination existing & new plant materials
- 4. Nature Trail
- **5.** Viewing Deck
- 6. Boardwalk



NOT TO SCALE

View from the Removed South Dam looking North



PLANTING

About Planting Choices

Plants have been selected for their suitability for a neighborhood park as well as their habitat value. Scrub Oak, Toyon and WIllows provide cover for birds and other small creatures, Elderberry and Toyon provide berries for food, Monkeyflower, Black Sage, Sunflower, Lupine and Ceanothus provide flowers for pollinating insects and hummingbirds and the grasses and sedges provide all-important habitat for insects.

Many species of animals, particularly birds migrating along the Pacific Flyway, depend on healthy wetlands and riparian areas for food and cover. As California has lost 90% of its freshwater wetlands, and what remains has been heavily impacted by agriculture and development, all of the plants selected here are typical in a Southern California Palustrine/ Lacustrine freshwater wetland and the surrounding chaparal.

This is not a comprehensive plant list for a full wetland restoration, but rather a selection of plants meant to contribute to a functioning ecosystem in and around fresh bodies of water.



Quercus berberidifolia



Platanus racemosa



Populus fremontii

Trees



Sambucus mexicana



Salix laevigata



Heteromeles arbutifolia

PLANTING

Chaparral -



Adenostoma fasciculatum



Ceanothus megacarpus

Embankment —



Carex spissa



Typha latifolia



Mimulus puniceus



Lupinus succulentus



Juncus patens



Scirpus californicus



Salvia mellifera



Helianthus gracilentus



Salix lasiolepis



Persicaria amphibia

Aquatic



Lemna minor



Cyperus eragrostis



Eleocharis macrostachya



Select Photo References:

KCET.org, *How Mulholland Made Ivanhoe Canyon Into Silver Lake* studio-mla.com, *Silver Lake Reservoir Path and Meadow* la.curbed.com, *How the Silver Lake Reservoir Helped Keep LA Hydrated for Over a Century*