South Los Angeles Wetland Park
American Academy of Environmental Engineers and Scientists
Excellence in Environmental Engineering and Science™ Conference
Superior Achievement Award
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Project Overview

- Multi-benefit stormwater treatment wetland and public nature park
- Proposition O Clean Stormwater Bond Program
- Conceived to Celebrate the Three Pillars of Sustainability
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Site Context

• Former Los Angeles County METRO 10-acre vehicle maintenance yard
• Historically underserved area
• Former Brownfield site

Rail Car Maintenance Facility (1930)

Bus Maintenance Facility (2008)
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Project Planning

Goal:
• Transform blighted transit-maintenance facility into a shared infrastructure resource and neighborhood-serving amenity

Challenges:
• Funding/Site control
• Community engagement
• Brownfield cleanup
• Sustainably engineered solution
• Maintenance and operation
Robust *pre-design* process

- Coalition of partners
- Community outreach
- Site investigations and studies
- Long term maintenance and operation
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Balanced Approach – Sustainably-engineered Solution

- 525 acre watershed
- Mediterranean/High Desert Climate
- Two treatment regimes
- Source/treatment water budget
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Site Plan Overview – Stormwater/Hydraulics

- Energy Dissipator/
- Headworks
- Weir And Orifice Controls
- Force Main Distribution
- Low Head Loss
- Diversion Structure
- Emergency Overflow
- Structural Pretreatment and Pump Station

Existing 63” R.C.P. Stormdrain

Weir And Orifice Controls

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Site Plan Overview – Environmental/Habitat

Native and Emergent Vegetation

Native Upland Vegetation

Geosynthetic Clay and LLDPE Liner System

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Site Plan Overview – Social and Educational

- Walking/Exercise Path
- Educational Signage
- Signage
- Bridge and Observation Platforms
- Outdoor Classroom/Rock Garden
- Educational Signage

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Before & After

Design-phase schematic depicting water flow through the new 3-cell stormwater treatment wetland

Aerial photograph of the wetland park post construction
Key Elements to Sustainability

Purpose, Community, Wellbeing

- Improved (created) site accessibility, safety and wayfinding
- Created a new amenity for a community in need
Key Elements to Sustainability

Collaboration, Management, Planning

- Extensive pre-design
- Partnership with City “family”
- Established long-term maintenance protocols early

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Key Elements to Sustainability

Materials, Energy, Water

- Reduced energy consumption throughout project life-cycle via use of SCADA controlled/multi-stage pump system and solar lighting

- Developed water budgeting approach to reduce potable water consumption
Key Elements to Sustainability

Siting, Land & Water, Biodiversity

- Selected a Brownfield site and remediated it
- Created natural habitat in an area that previously had none
- Used urban runoff as a resource
Resilience

• Built in flexible features so that the wetland may be operated differently in the future

• Designed to work in extreme flood and drought scenarios
The Park satisfied the mandate to improve stormwater quality, and:

- Helped reinvigorate a community
- Created new habitat
- Protected historic resources
- Created a new public park in a neighborhood that was sorely deficient
Discussion

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