



Devil's Gate Reservoir Sediment Removal and Management Project – Draft EIR

Community Meetings

November 6, 2013

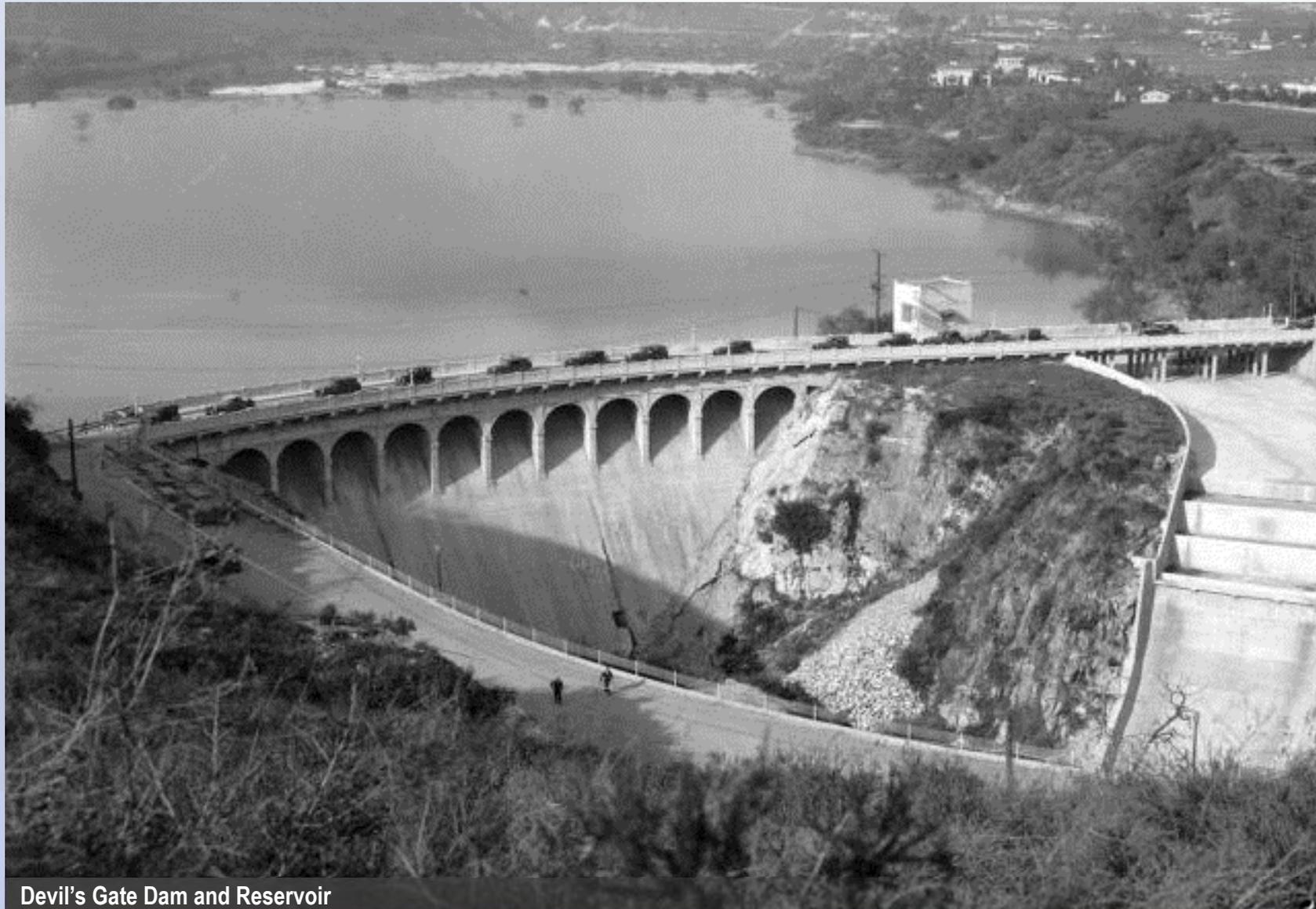
November 14, 2013

November 16, 2013



Presentation By: Keith Lilley, P.E.

Devil's Gate Dam & Reservoir



Devil's Gate Dam and Reservoir

Devil's Gate Reservoir Sediment Removal and Management Project

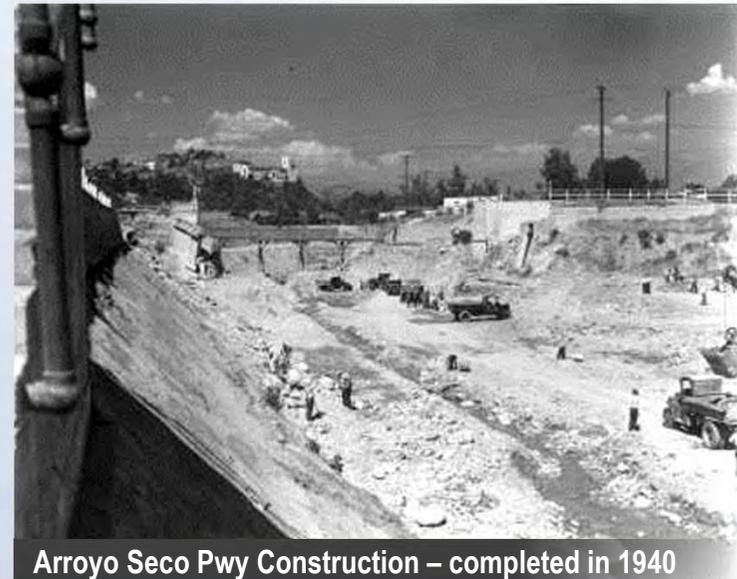
Downstream Construction



Rose Bowl Construction – completed in 1922



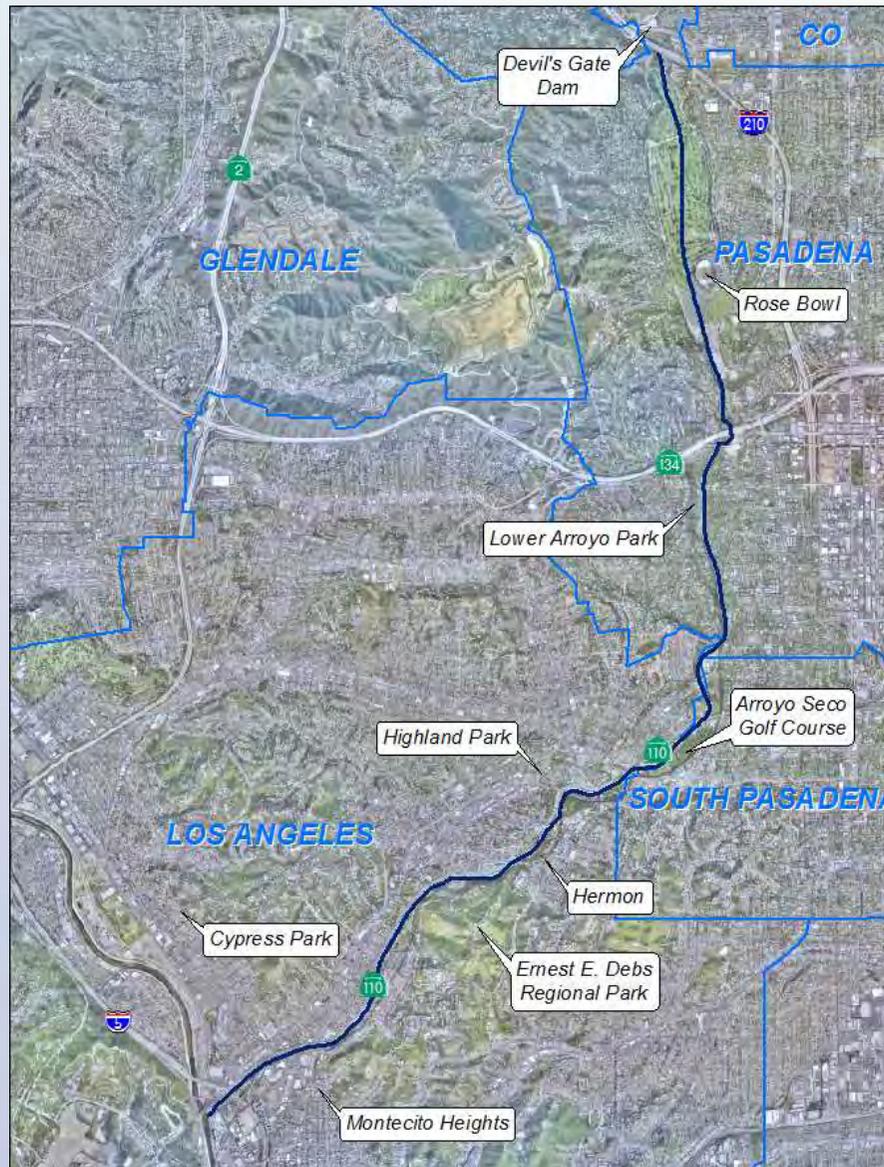
Arroyo Seco Channel Construction – completed in 1935



Arroyo Seco Pwy Construction – completed in 1940

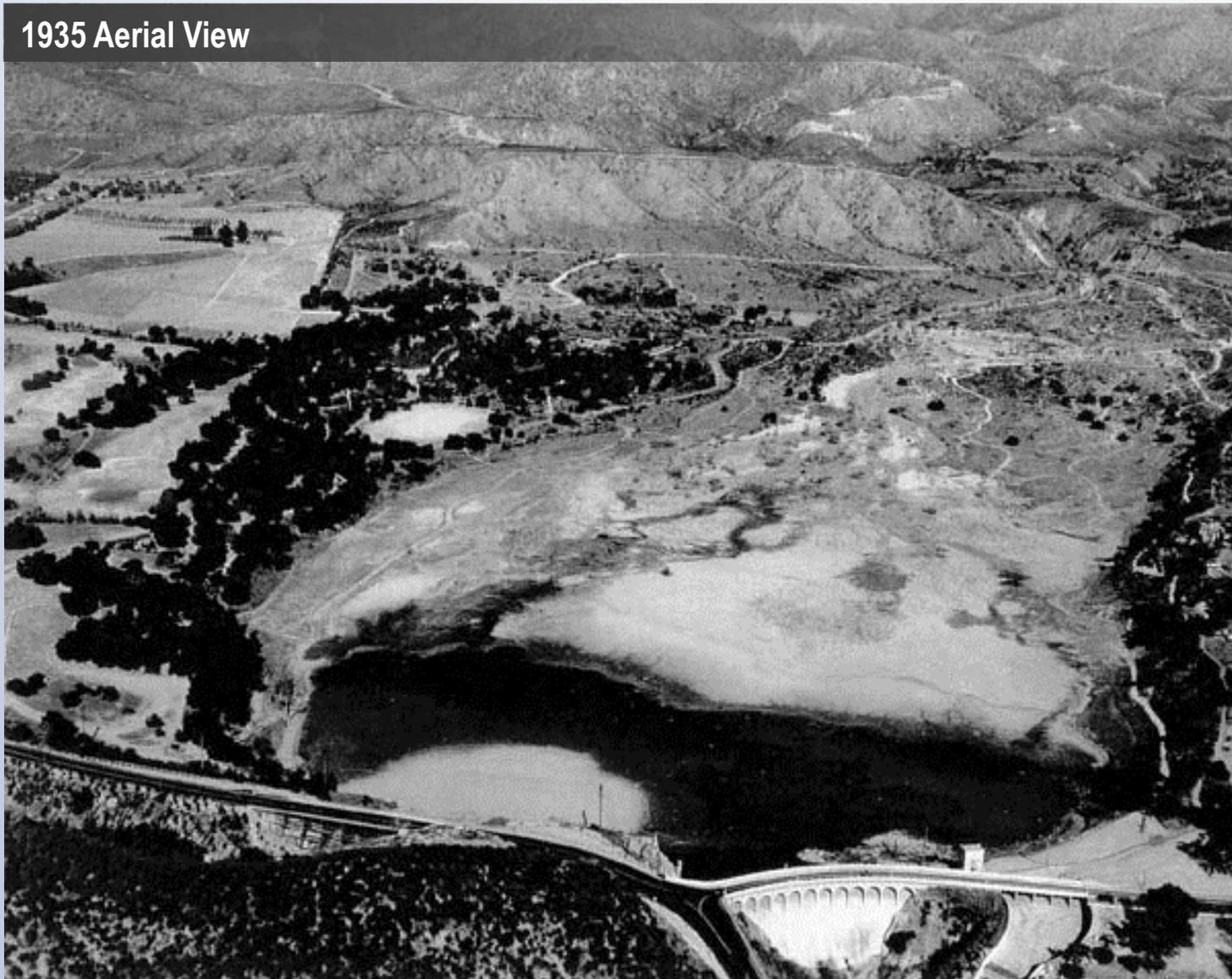


Downstream Communities

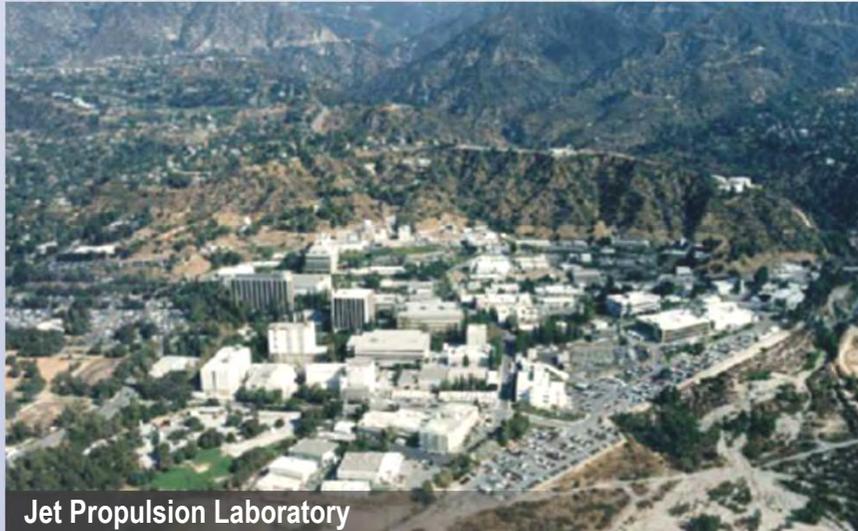




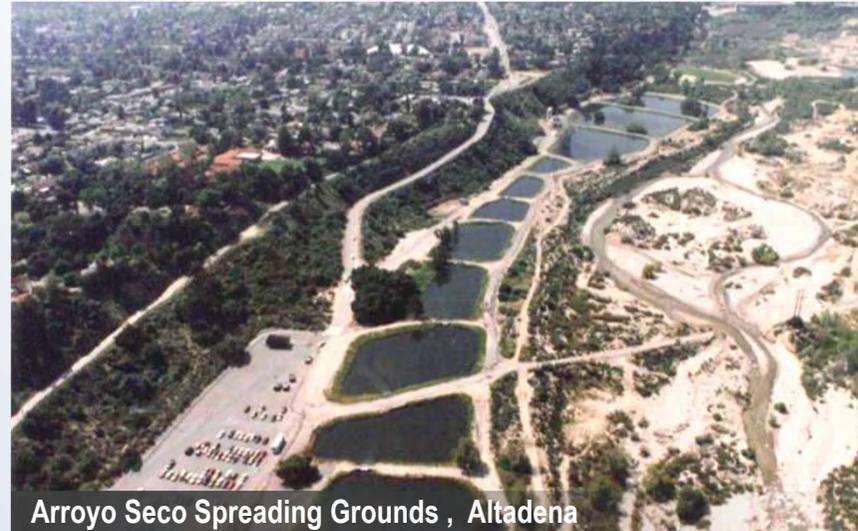
1935 Aerial View



Nearby Facilities



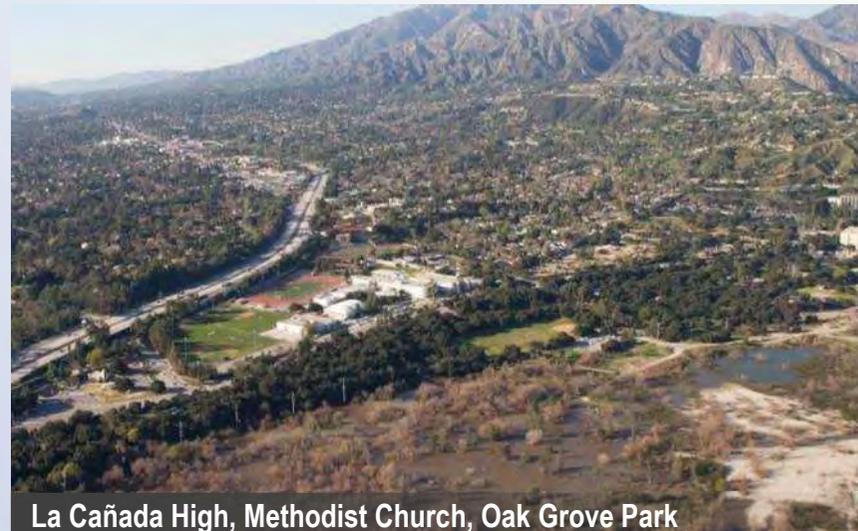
Jet Propulsion Laboratory



Arroyo Seco Spreading Grounds , Altadena



Mining Operation



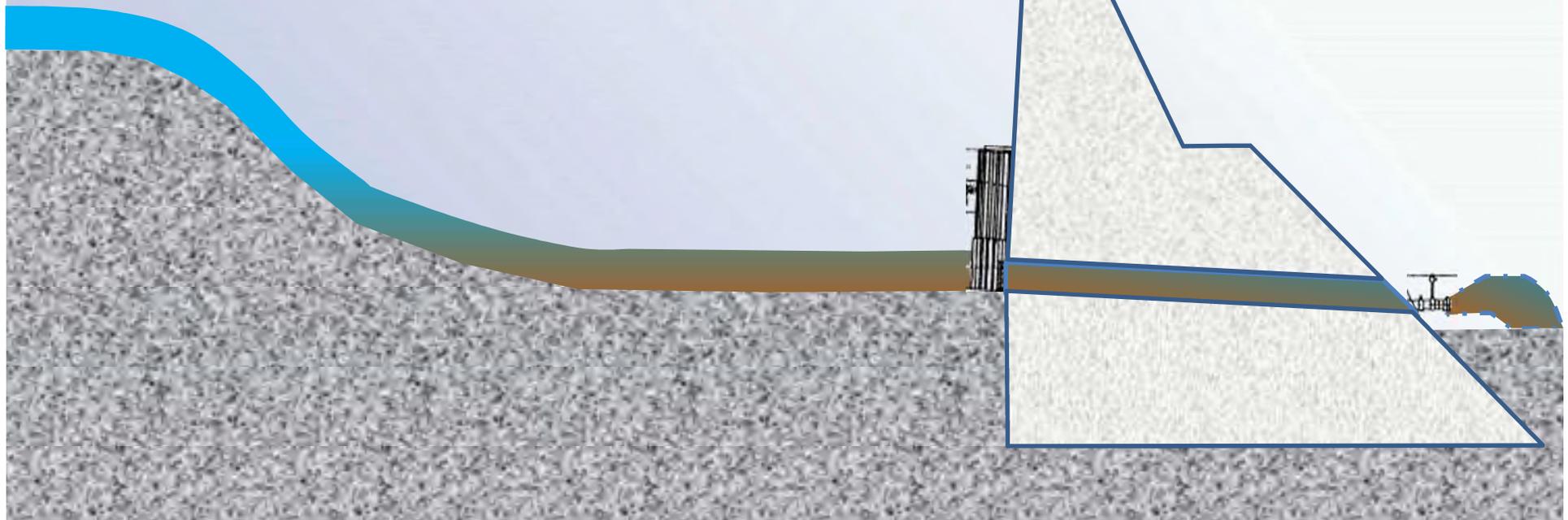
La Cañada High, Methodist Church, Oak Grove Park



Flood Control Operations

Normal storm flows pass through the reservoir

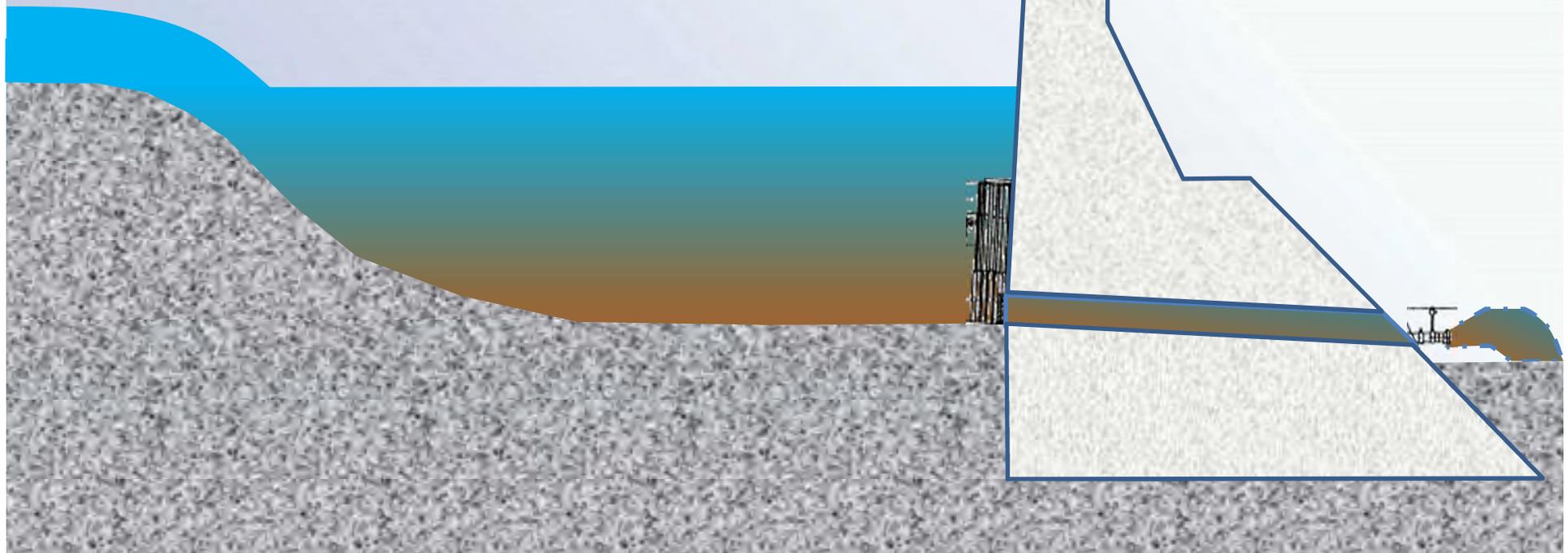
“FAST” reduces sediment accumulation





Flood Control Operations

Normal storm flows through the reservoir
Outlet flows can be controlled by the dam.
A buffer pool is built to accommodate for
larger storm flows.

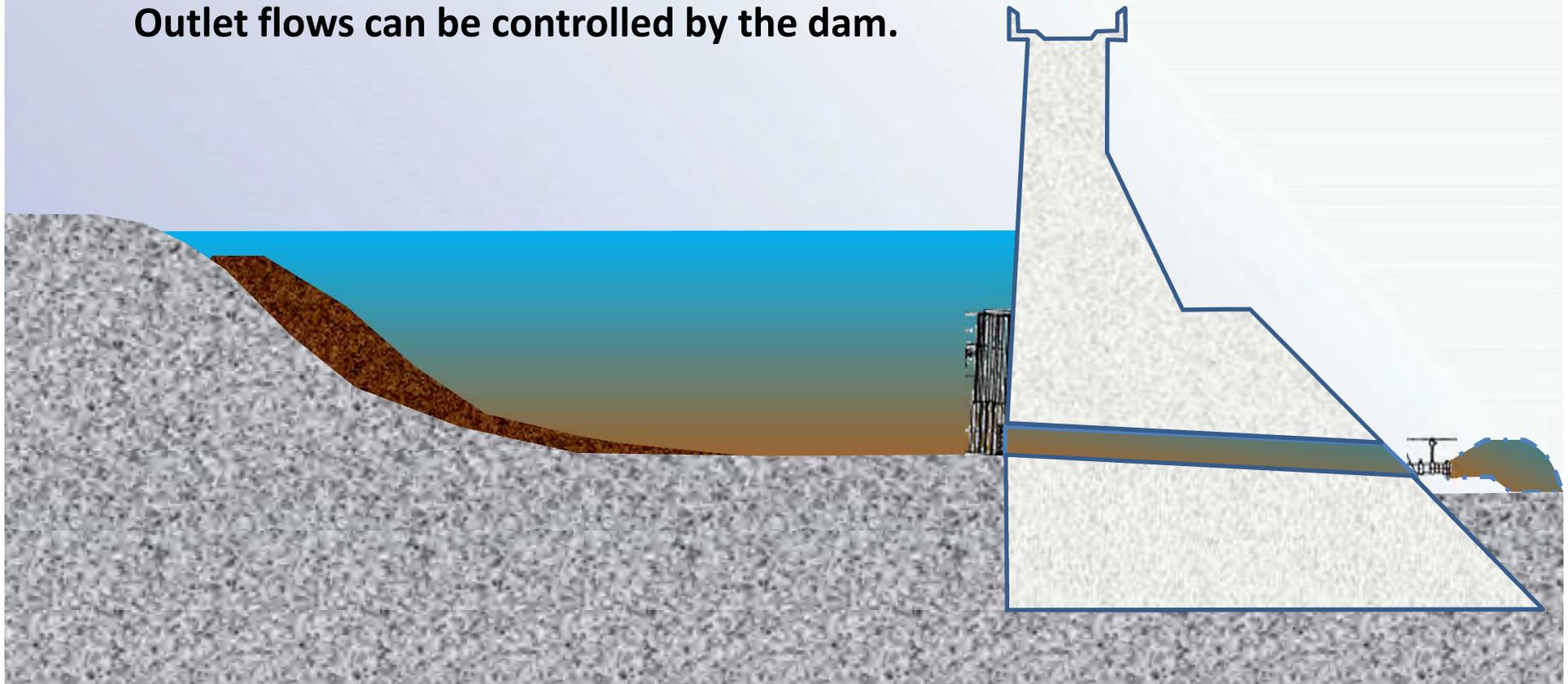




Flood Control Operations

Sediment and debris is left behind once reservoir is drained

Outlet flows can be controlled by the dam.



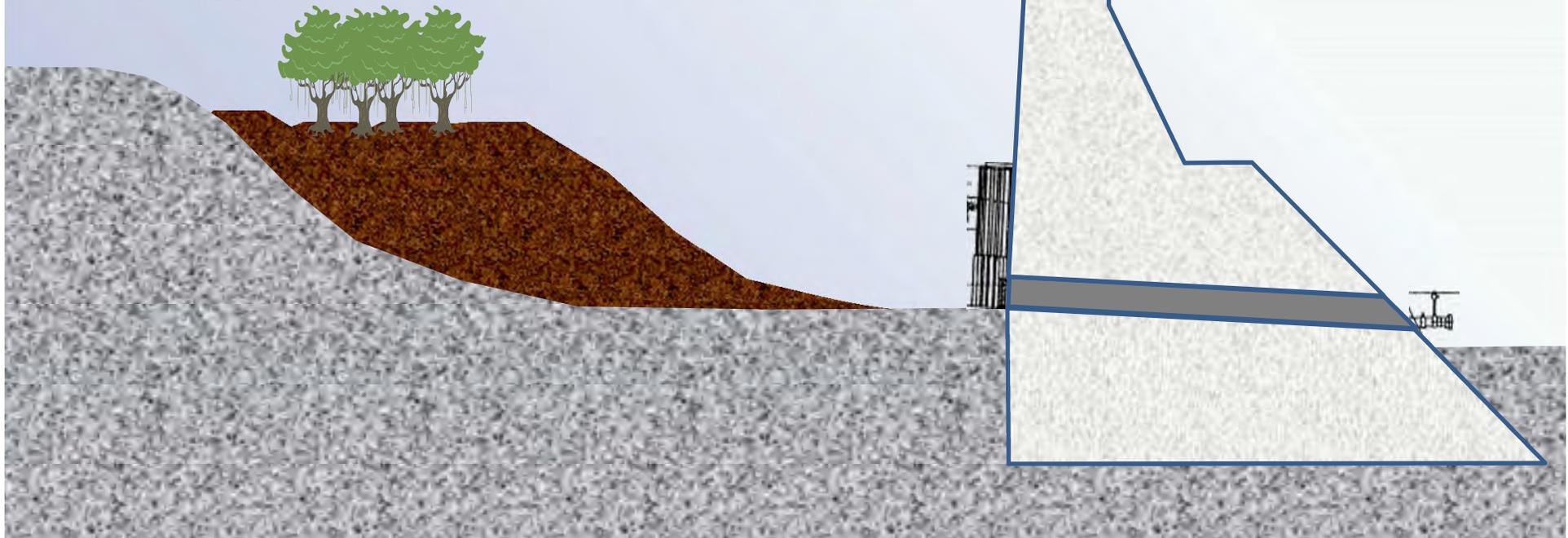


Flood Control Operations

Sediment continues to build with each storm

Sediment and debris is left behind once water is released

After time, vegetation begins to grow in the reservoir



Devil's Gate at Spillway



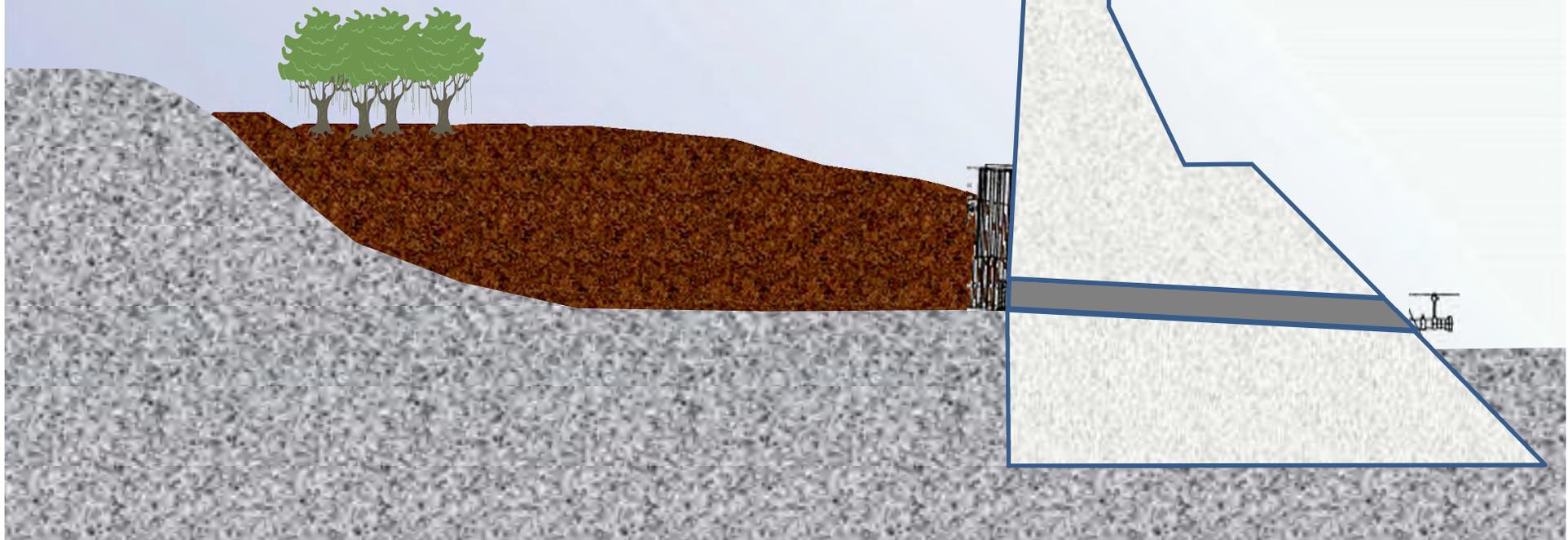
Devil's Gate 2005

Source: Arroyo Seco Foundation



Sediment Concerns

- Potential to block outlet works
- “FAST” no longer effective
- Mechanical sediment removal project needed





A Regional Disaster: 2009 Station Fire

Largest fire in Los Angeles County Recorded History

- Burned over 160,000 acres in the San Gabriel Mountains
- Burned approximately 68% of the Devil's Gate watershed



Station Fire 2009



Station Fire burning behind JPL

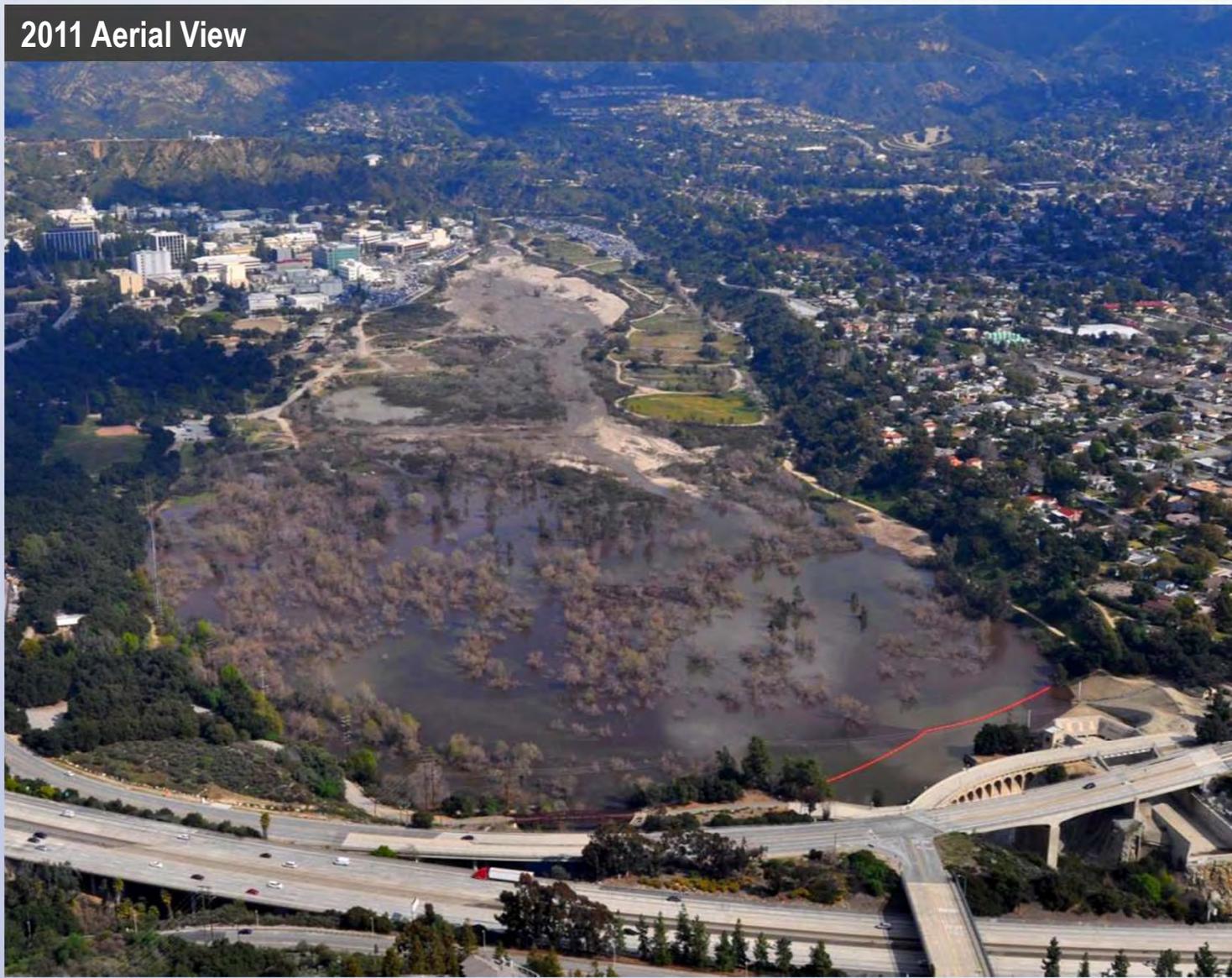




Devil's Gate Reservoir Sediment Removal and Management Project



2011 Aerial View

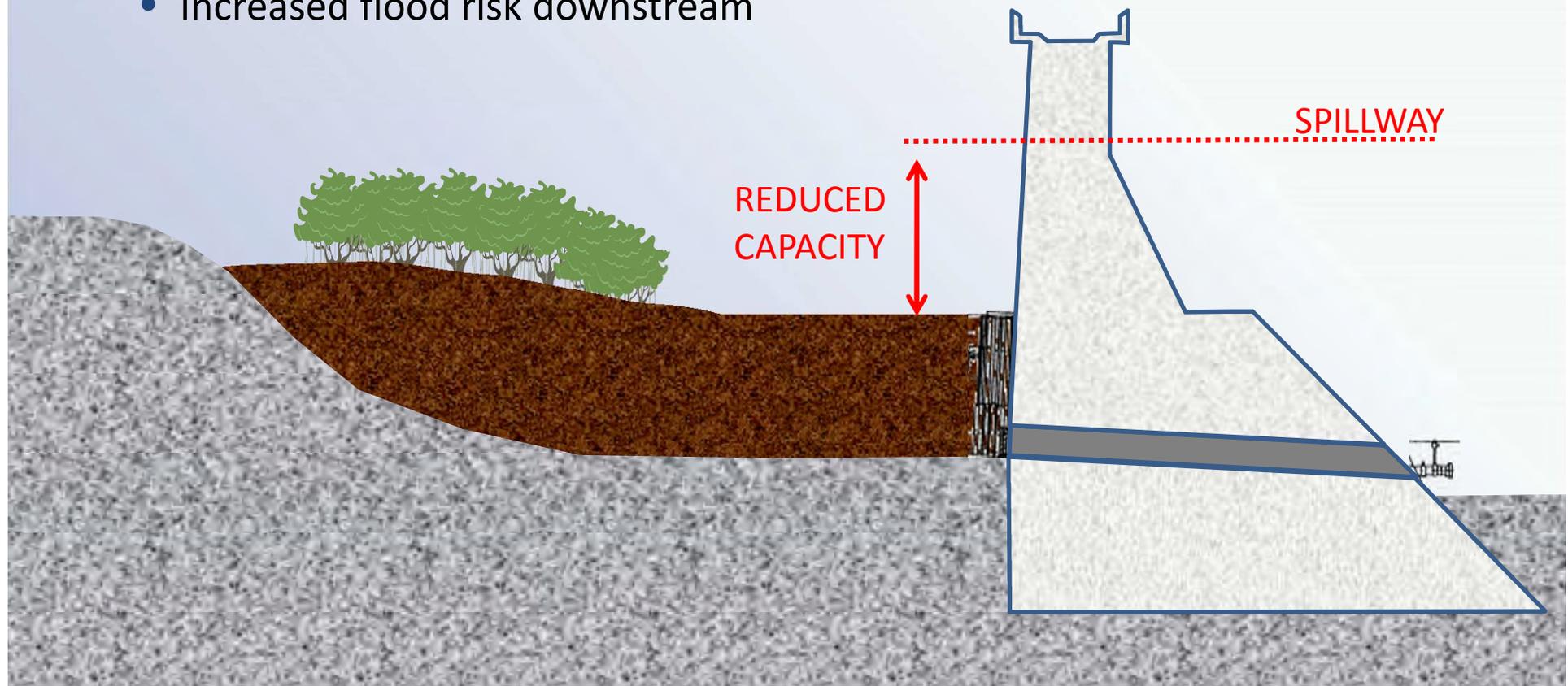


Devil's Gate Reservoir Sediment Removal and Management Project



Sediment Concerns

- Reduction in reservoir capacity
- Potential to block outlet works
- Increased flood risk downstream



Interim Measures Project (IMP)



IMP Impact Boundary



IMP Construction

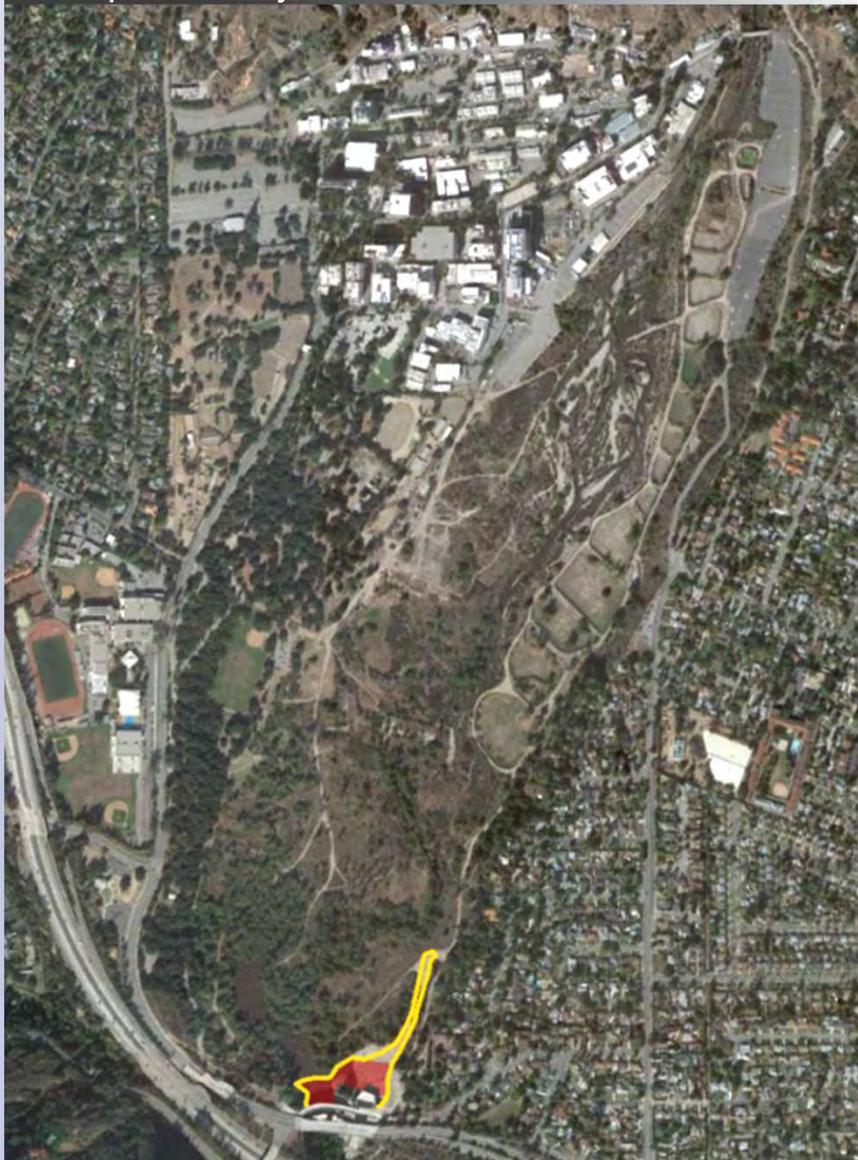


Improvements to the Sluice Gate Trash Rack

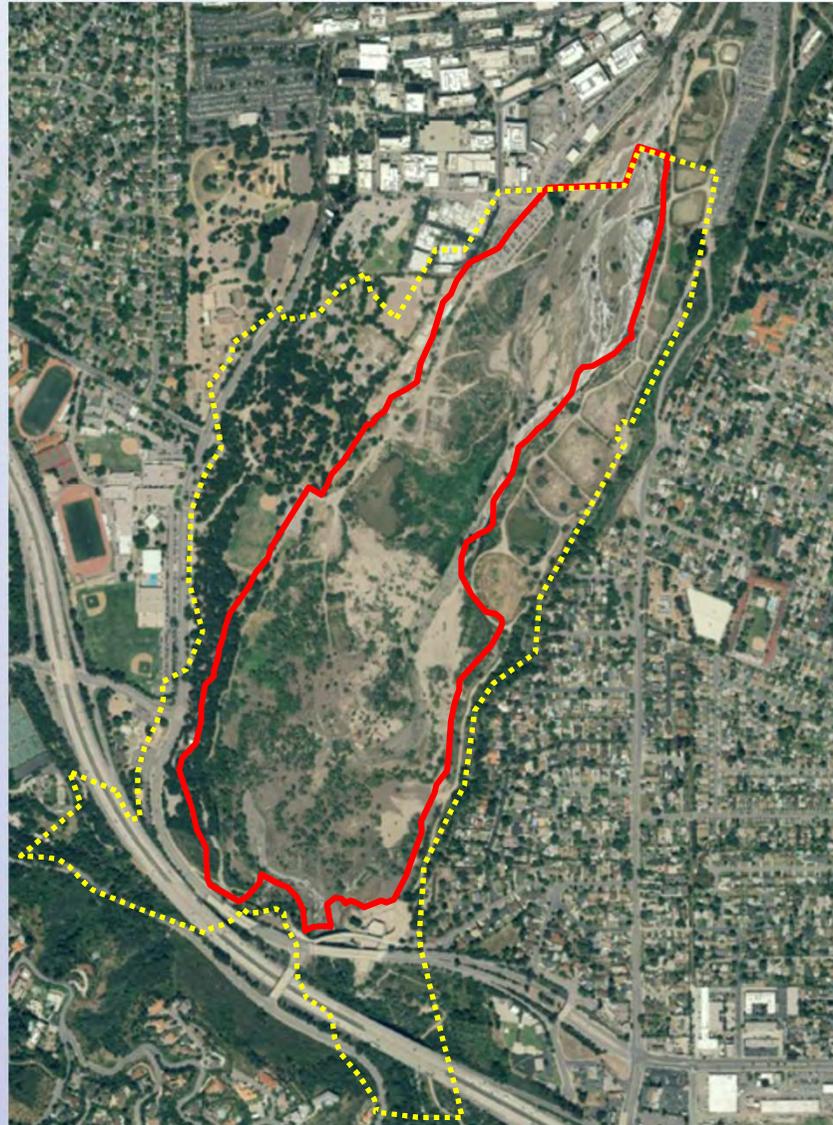
Interim Measures Project (IMP)



IMP Impact Boundary



Devil's Gate Reservoir Sediment Removal & Management Project





PROJECT OBJECTIVES

1. Restore reservoir capacity to reduce flood risk to downstream communities.
2. Create a more sustainable reservoir configuration.
3. Remove sediment from the face of the dam for an operational pool.
4. Remove sediment placed at Johnson Field
5. Remove sediment from the reservoir in a timely manner to support dam safety
6. Deliver Sediment to a facility designed to accept it without native vegetation and habitat removal





Potential Project Alternatives

Based on community input received during project scoping, several alternatives were developed which have less environmental impact.

- Alternative reservoir configurations with different areas of sediment removal and different areas where vegetation will reestablish.
- Sluicing alternative.
- Alternative traffic routes.



Project Site Overview



Proposed Project



Project Alternatives



Alternative P



Sediment Removal Quantity - 2,950,000 cy
Sediment Removal Area - 120.42 ac
Future Maintenance Area - 91.96 ac

Alternative 1



Alternative 1



	Sediment Removal Quantity - 2,800,000 cy
	Sediment Removal Area - 83.08 ac
	Future Maintenance Area - 54.56 ac

Alternative 2



Alternative 2



Sediment Removal Quantity - 4,000,000 cy

Sediment Removal Area - 83.96 ac

Future Maintenance Area - 47.10 ac

Alternative 3



Alternative 3



Sediment Removal Quantity - 2,425,000 cy
Sediment Removal Area - 75.99 ac
Future Maintenance Area - 50.78 ac

Alternative 3



Alternative 4 - Sluicing



- Chang Consultants
 - Howard H. Chang, Ph.D., P.E.
 - San Diego State University
 - FLUVIAL-12, national standard for sediment modeling

Alternative 4 - Sluicing

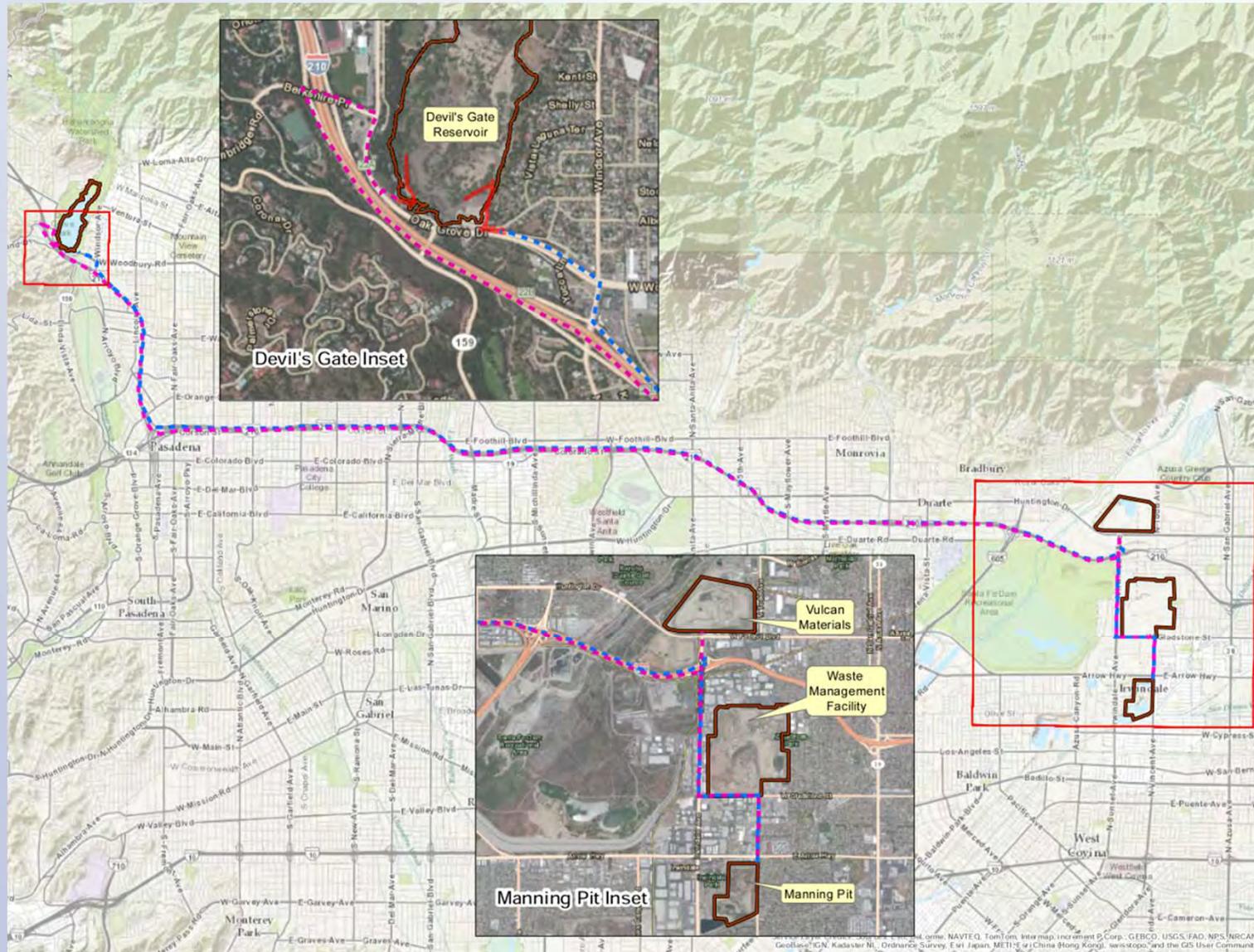


Sediment Removal Quantity - 2,950,000 cy

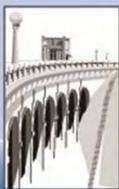
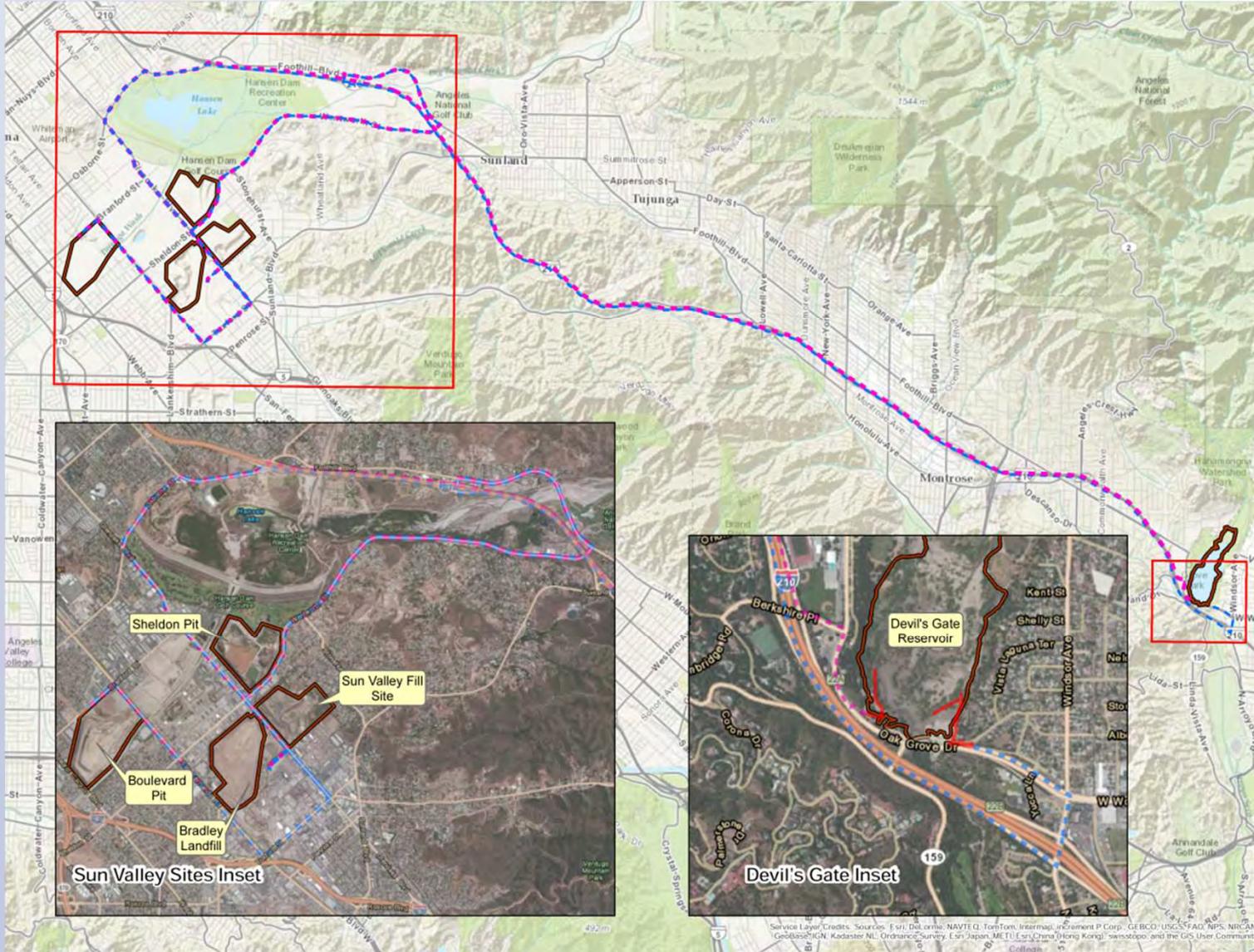
Sediment Removal Area - 120.42 ac

Future Maintenance Area - 91.96 ac

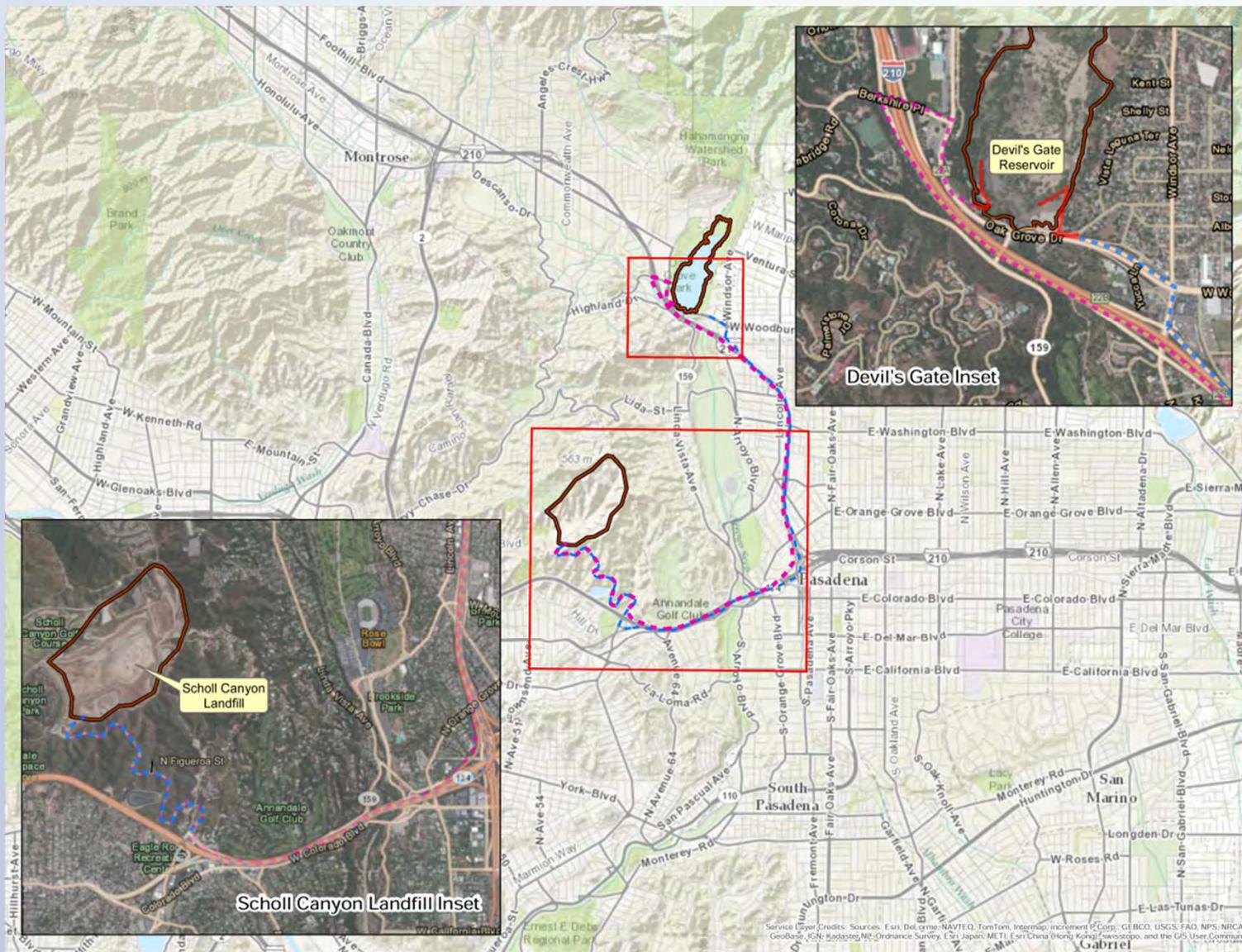
East Placement Sites



West Placement Sites



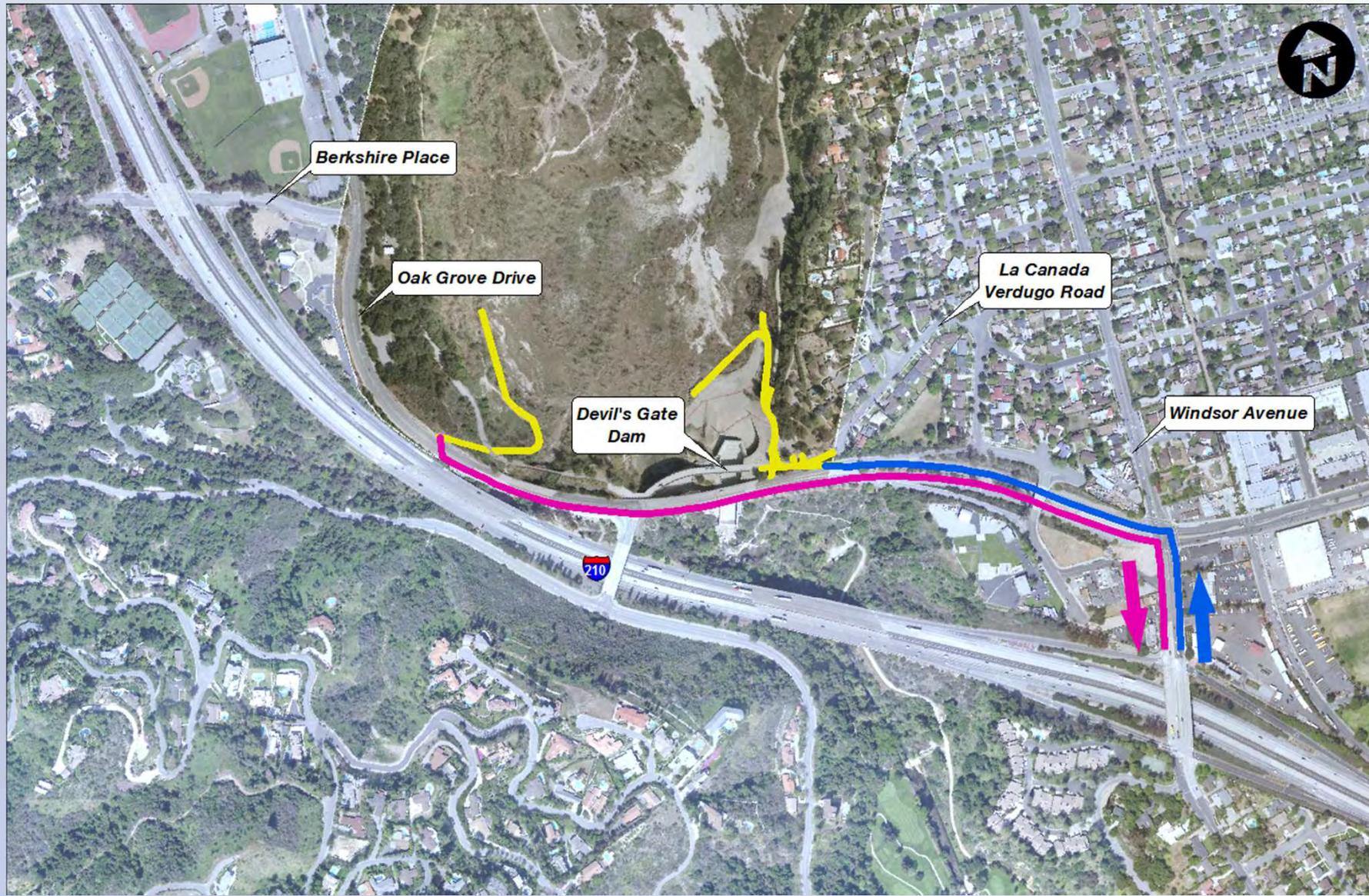
Scholl Canyon Landfill



Proposed Haul Routes

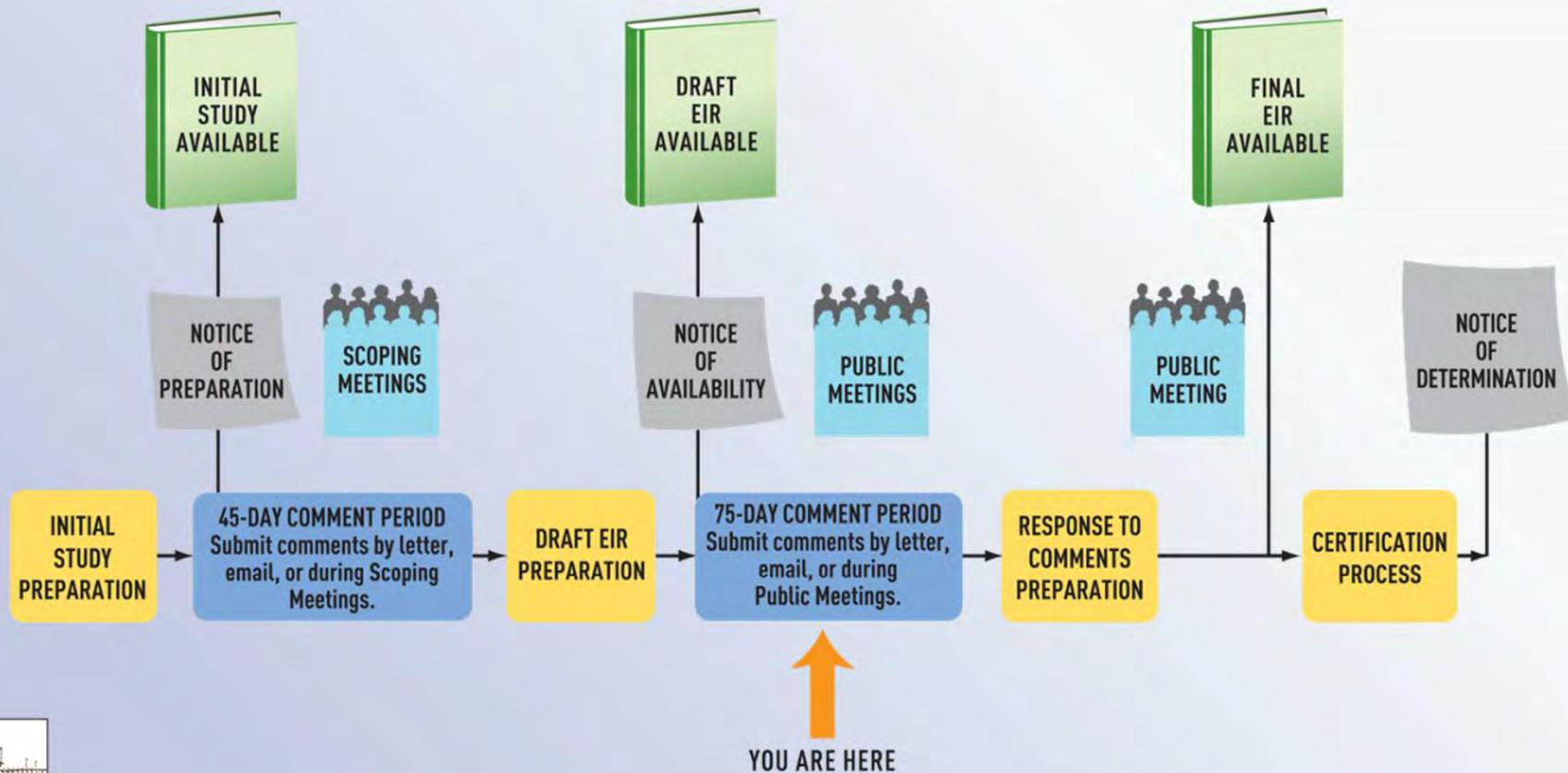


Alternative Haul Routes





Environmental Impact Report Process





Devil's Gate Reservoir Sediment Removal and Management Project

Draft Environmental Impact Report
(DEIR)



Presentation By: Brian Mooney AICP



Public Input Process





Draft Environmental Impact Report Issues Analyzed

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology & Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use & Planning
- Mineral Resources
- Noise & Vibration
- Recreation & Public Services
- Transportation & Traffic
- Utilities & Service Systems

Green = Less than Significant

Blue = Less than Significant with Mitigation

Orange = Significant and Unavoidable





Methods and Approach to Analysis

- Field Work
- Data collection
- Statistical analysis: Air Quality, GHG, Noise, and Traffic models
- Analysis in accordance with CEQA Guidelines
- Identification of Mitigation Measures





Draft EIR Findings – Significant and Unavoidable Impacts

- Aesthetics: impacts to scenic vistas and visual characteristics of the site





Draft EIR Findings – Significant and Unavoidable Impacts

- Air Quality: sediment removal emissions of NO_x would exceed the Daily Regional Threshold

Unmitigated Sediment Removal Emissions

Category	Maximum Daily Emissions (lbs/d)				
	ROG	CO	NO _x	PM ₁₀	PM _{2.5}
Off-Road	7.54	33.99	55.18	2.87	2.87
On-Road Trucks	7.15	34.87	314.93	5.33	4.91
Employees	0.07	2.44	0.24	0.00	0.00
Fugitive	0.00	0.00	0.00	27.30	4.44
Project Maximum Daily	14.78	71.30	370.30	13.70	8.70
SCAQMD Daily Threshold	75.00	550.00	100.00	150.00	55.00
Exceeds Threshold?	No	No	Yes	No	No





Draft EIR Findings – Significant and Unavoidable Impacts

- Transportation & Traffic: AM & PM peak period impacts





Draft EIR Findings – Impacts Fully Mitigated

- Biological Resources
 - Sensitive Habitats: Riparian Woodland, Riversidean Alluvial Fan Sage Scrub, Coastal Sage Scrub, Oak Woodland, Mule Fat Scrub
 - Sensitive Species: least Bell's vireo, yellow warbler, coast range newt, two-striped garter snake
 - Mitigation includes watershed enhancement





Draft EIR Findings – Impacts Fully Mitigated

- Cultural Resources
 - Mitigation Measures if activities exceed the depth of historic flood deposits and encounter native sediment
- Land Use & Planning
 - Mitigation includes advanced notification and redirection to nearest recreational facility
- Noise & Vibration
 - Mitigation restricts operation of specific off-road construction equipment within 180 feet of any offsite residential structure



Draft EIR Findings – Environmentally Superior Alternative (Alt 3, Config D)



Alternative 3 (Configuration D)





Additional Alternatives Considered

- Conveyor Belt Alternative
- Slurry Pipeline Alternative
- Dam Removal Alternative
- Upstream Sediment Management Alternative





Draft EIR Repositories

- Linda Vista Library, 1281 Bryant Street, Pasadena
- Pasadena Central Library, 285 East Walnut Street, Pasadena
- San Rafael Branch Library, 1240 Nithsdale, Pasadena
- Altadena Library District, 600 East Mariposa Street, Altadena
- Bob Lucas Memorial Library, 2659 Lincoln Avenue, Altadena
- La Cañada Flintridge Library, 4545 N. Oakwood Avenue, La Cañada Flintridge
- Irwindale Public Library, 5050 Irwindale Avenue, Irwindale
- Sun Valley Library, 2935 Vineland Avenue, Sun Valley
- Los Angeles County Department of Public Works, 900 S. Fremont Avenue, Alhambra (2nd Floor, Water Resources Public Counter)
- LACDPW/LACFCD Website (www.lasedimentmanagement.com)





Submit Written Comments

PUBLIC MEETINGS

Wednesday, November 6, 2013, 6:00 - 8:00 p.m.

Rose Bowl Stadium, Visitor's Locker Room,

Thursday, November 14, 2013, 6:30 - 8:30 p.m.

Jackson Elementary School Auditorium

Saturday, November 16 2013, 2:00 - 4:00 p.m.

Community Center of La Cañada Flintridge

EMAIL

reservoircleanouts@dpw.lacounty.gov

Include "Devil's Gate Reservoir Sediment Removal and Management Project" in the subject title.

WRITTEN

Los Angeles County Department of Public Works

Attn: Water Resources Division - Reservoir Cleanouts

P.O. Box 1460, Alhambra, CA 91802-9974

Comment Period

**Wednesday, October 23, 2013 to Monday,
January 6, 2014**

