

Devil's Gate Reservoir Restoration Project



Presented by: Steve Burger and Brittany Barker



Construction

Phase 1 – Habitat Restoration

(on-going)

Phase 2 – Vegetation Removal

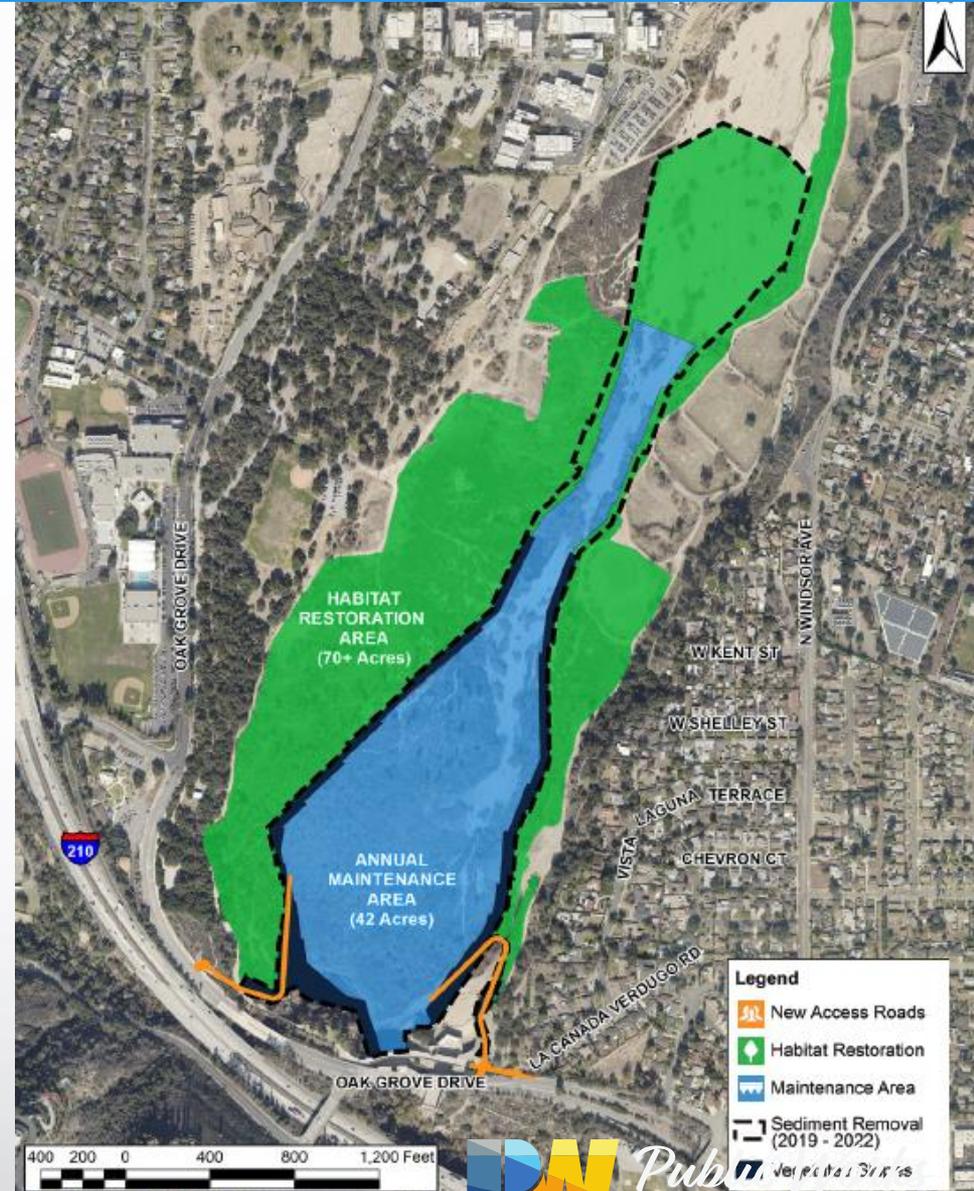
(completed)

Access Road Construction

(nearly completed)

Phase 3 – Sediment Removal

Scheduled to begin in mid-May

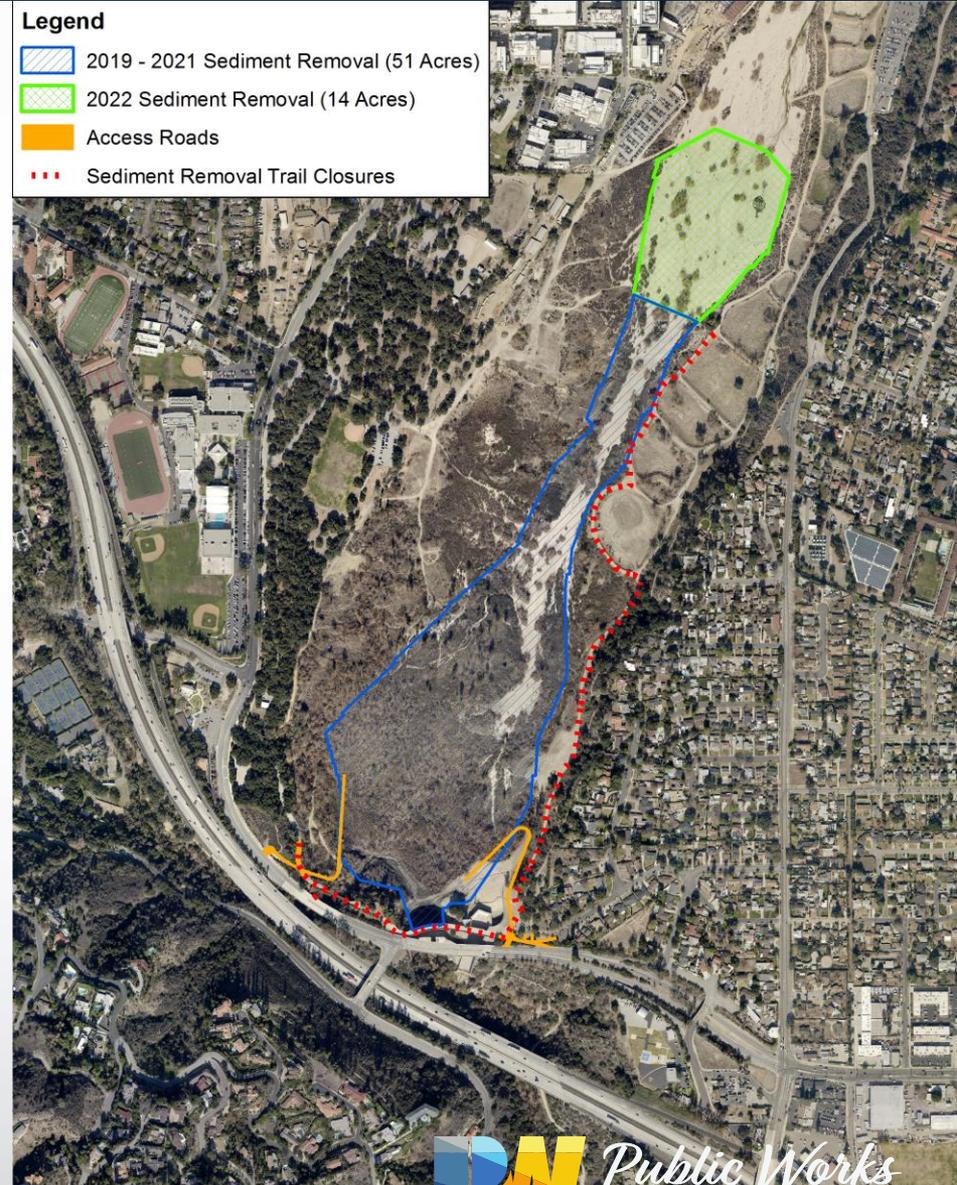


Phase 3: Sediment Removal

- April - November (2019 – 2022)
- Sediment haul trucks will meet model year 2010 emission standards
- Approximately 95 trucks will be used to make a maximum of 425 roundtrip truck trips daily
- Monday - Friday, 7 am to 5 pm with hauling ending at 3:30 pm
- No work on weekends, holidays, or during major Rose Bowl events
- Prior to final season of sediment removal, remaining 14 acres of vegetation will be removed at north end of reservoir

Legend

-  2019 - 2021 Sediment Removal (51 Acres)
-  2022 Sediment Removal (14 Acres)
-  Access Roads
-  Sediment Removal Trail Closures



Phase 3: Sediment Removal



Sediment Built up Behind the Dam

Phase 3: Trail Closures

- Trails temporarily closed during weekdays, from 7 am to 5 pm, daily.
- Trails open on the weekends.





Taking a Community-First Approach



Varying haul routes and timing to avoid traffic impacts, and balance truck traffic between the communities.





Taking a Community-First Approach



- During AM Drop Offs (7:00 am – 10:00 am)
- After AM Drop Offs (10:00 am – 3:30 pm)
- Hauling when School is on Summer Break (7:00 am – 3:30 pm)

Varying haul routes and timing to avoid traffic impacts, and balance truck traffic between the communities.





Taking a Community-First Approach





Soil Sampling

- Following the 2009 Station Fire, 1.3 MCY of sediment came off the San Gabriel Mountains during the 2010 storm season.
- EIR: In 2011, 24 soil samples were taken at various depths from 4 boring locations, up to a maximum 30' depth
 - "Arsenic concentrations consistent with the average concentration range in California soils of 3.5 mg/kg and can be mitigated with adequate dust suppression including the use of water trucks to moisture condition soil during grading and excavation operations."
 - "All other concentrations of contaminants of concern are below risk management criteria and regulatory thresholds, and are not considered a hazard."

<https://dpw.lacounty.gov/wrd/Projects/DevilGate/FEIR/Appendix F - Geotechnical Report.pdf>



Above and Beyond

- LCF 4 Healthy Air requested additional recent soil sampling be performed.
- In February 2019, 21 additional soil samples were taken at various depths from 5 boring locations, up to design depth.
- Results were again consistent with the EIR. Concentrations of contaminants of concern are below risk management criteria and regulatory thresholds.

<https://dpw.lacounty.gov/swe/devilsgate/docs/Sediment%20Assessment%20-%20March%202019.pdf>





Compliance Verification – Sediment Haul Trucks

Contract Items

- Truck engines meeting Model Year **2010 Emission Standards** (more stringent than just MY2010)
 - Of 101 trucks submitted, **32 were rejected**
- All sediment haul trucks will be registered with CARB utilizing the Truck Regulation Upload Compliance and Reporting System (TRUCRS)
- A copy of the CARB Executive Order will be submitted



LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
 CONSTRUCTION DIVISION – ENVIRONMENTAL COMPLIANCE UNIT
 NOx AND PM₁₀ EMISSIONS REPORTING FORM **ON-ROAD DIESEL-FUELED EQUIPMENT**

Project Name		Project No.	
Reporting Month/Year		Name of Responsible Official	

Truck License Plate No.	Truck Description	Company Name	Engine Model Year ⁽¹⁾	GVWR greater 26,000 lbs. (Y/N)	TRUCRS ⁽²⁾ ID	VDECS ⁽³⁾		
						PM Level ⁽⁴⁾	Product Name and Technology Type	Executive Order No. ⁽⁵⁾

By signing below, I, the responsible official, affirm and certify under penalty of perjury, under the laws of the State of California, that I have used all reasonable diligence in preparing this report, and that I have reviewed this report and the information reported on this form is true, accurate, and complete to the best of my knowledge. By signing below, I further certify that I have the authority to make this affirmation and certification for the equipment indicated above.

 Signature of Responsible Official/Designated Official ⁽⁶⁾

 Date

 Print Name of Responsible Official/Designated Official ⁽⁶⁾

 Company Name

- (1) Only haul trucks that Environmental Protection Agency's Emission Standards for Model Year 2010 or later shall be operated on the project.
- (2) Truck Regulation Upload Compliance and Reporting System (TRUCRS)
- (3) Verified Diesel Emission Control Strategies (VDECS). Attach copy of the Executive Order issued by California Air Resources Board for this engine model.
- (4) Level 1 shall not be permitted. Level 2 (50% PM reduction) may be used if Level 3 (85% reduction) is not available.
- (5) Attach copy of the Executive Order issued by California Air Resources Board for VDECS.
- (6) Responsible Official/Designated Official shall be the person reported on the Responsible Official Affirmation of Reporting (ROAR) for the Current Reporting Year (CARB Form MSCD/ORB-143 (REV 12/15)). Attach a copy of the ROAR for the Current Reporting Year to this form. To designate a different Responsible Official, submit the Designated Official Form from the ROAR.

EXHIBIT B





Compliance Verification – Sediment Haul Trucks

7-1 THE CONTRACTOR'S EQUIPMENT AND FACILITIES.

7-1.1 General. Add the following:

The engines of sediment removal haul trucks and off-road equipment parked or stationary at Devil's Gate Reservoir shall not be started before 7 a.m.

On-road diesel-powered trucks shall limit idling time to no more than 5 minutes.

Add the following:

7-1.4 On-Road Diesel-Powered Sediment Removal Haul Trucks. Trucks used for transporting excavated sediment shall meet the United States Environmental Protection Agency's emission standards for model year 2010 or newer. Refer to 7-8.2.3.

No exemptions (i.e. three day pass issued from California Air Resources Board) will be accepted.

7-1.5 Off-Road Diesel-Powered Equipment. Off-road equipment used during sediment removal and placement operations shall meet, at a minimum, the United States Environmental Protection Agency emission standards for Tier 3 equipment. Refer to 7-8.2.3.



Above and Beyond – Recalled Trucks

- In the December 5th meeting, LCF 4 Healthy Air informed everyone that the EPA recalled 500,000 engines for defective NOx control systems.
- The list of recalled Cummins Engine Families are found here:
<https://ww3.arb.ca.gov/msprog/truckstop/azregs/cumminsrecall.htm>
- Verification of recalled engine:
 - ~~Registration Card~~
 - CARB Executive Order
- Of the 101 trucks that have been submitted to date, only **1 was under the emissions recall.**
- Public Works has committed to not allowing trucks that are affected by the recall to perform work on the project until they have been repaired.
- Compliance verification information can be found here:
<https://dpw.lacounty.gov/swe/devilsgate/docs/SedimentHaulTruckCompliance.pdf>

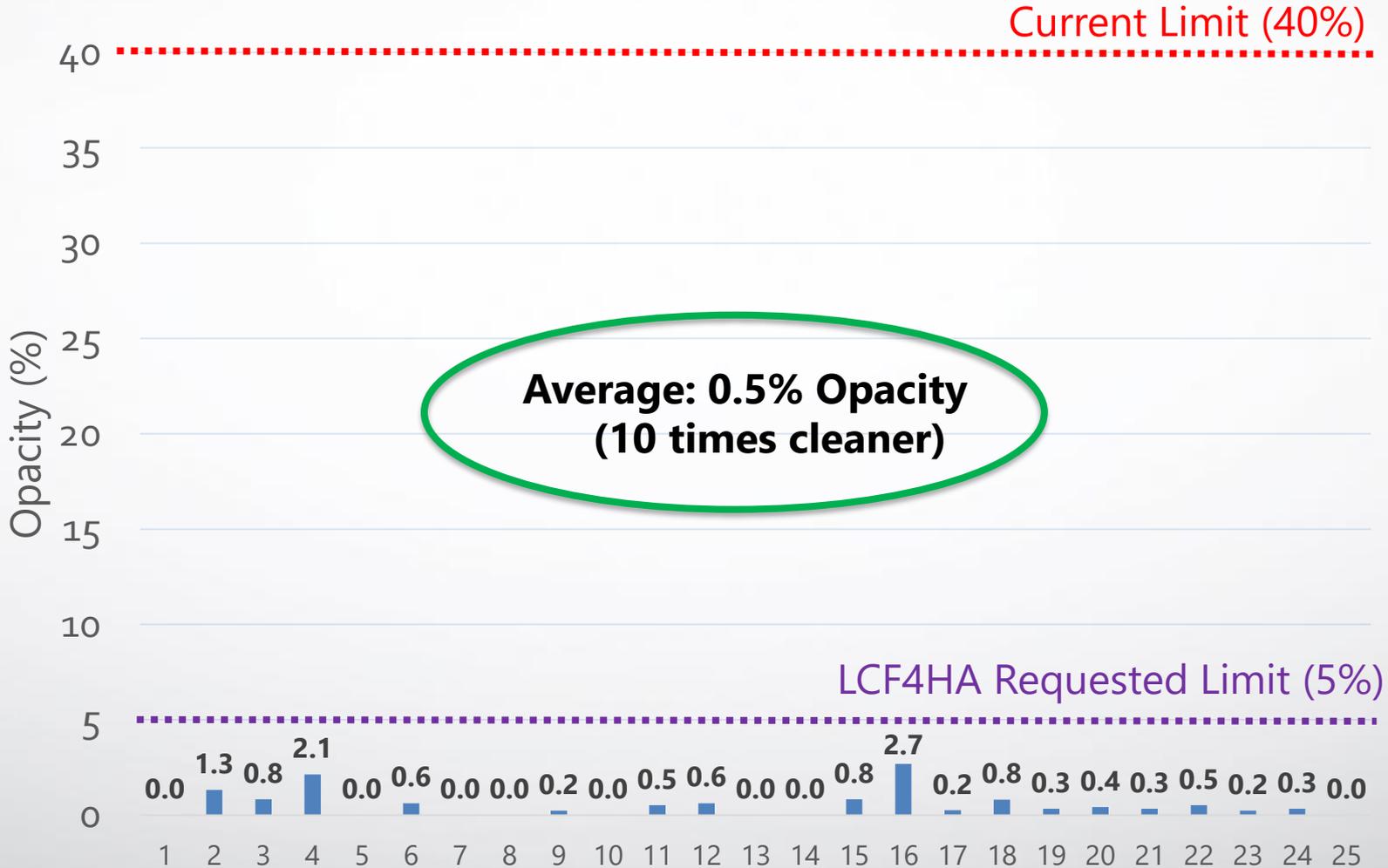


Above and Beyond – PSIP Testing

- LCF 4 Healthy Air informed everyone that 2010 trucks could still be high polluters and requested the County have each truck perform a Periodic Smoke Inspection Program (PSIP) Test.
- The current CARB threshold for engines 1991 or newer: **40% opacity.**
- LCF 4 Healthy Air requested that we reduce the threshold down to **5% opacity and the County agreed.**
- Based on this request, the County is paying for Owner Operators to conduct PSIP tests and submit passing results to Public Works prior to performing work on this project.
- **Additionally, Public Works will have a CARB certified Visible Emission Evaluation (VEE) person on site weekly.**
- Compliance verification information can be found here:
<https://dpw.lacounty.gov/swe/devilsgate/docs/SedimentHaulTruckCompliance.pdf>



PSIP Test Results





Above and Beyond – Check Engine Lights

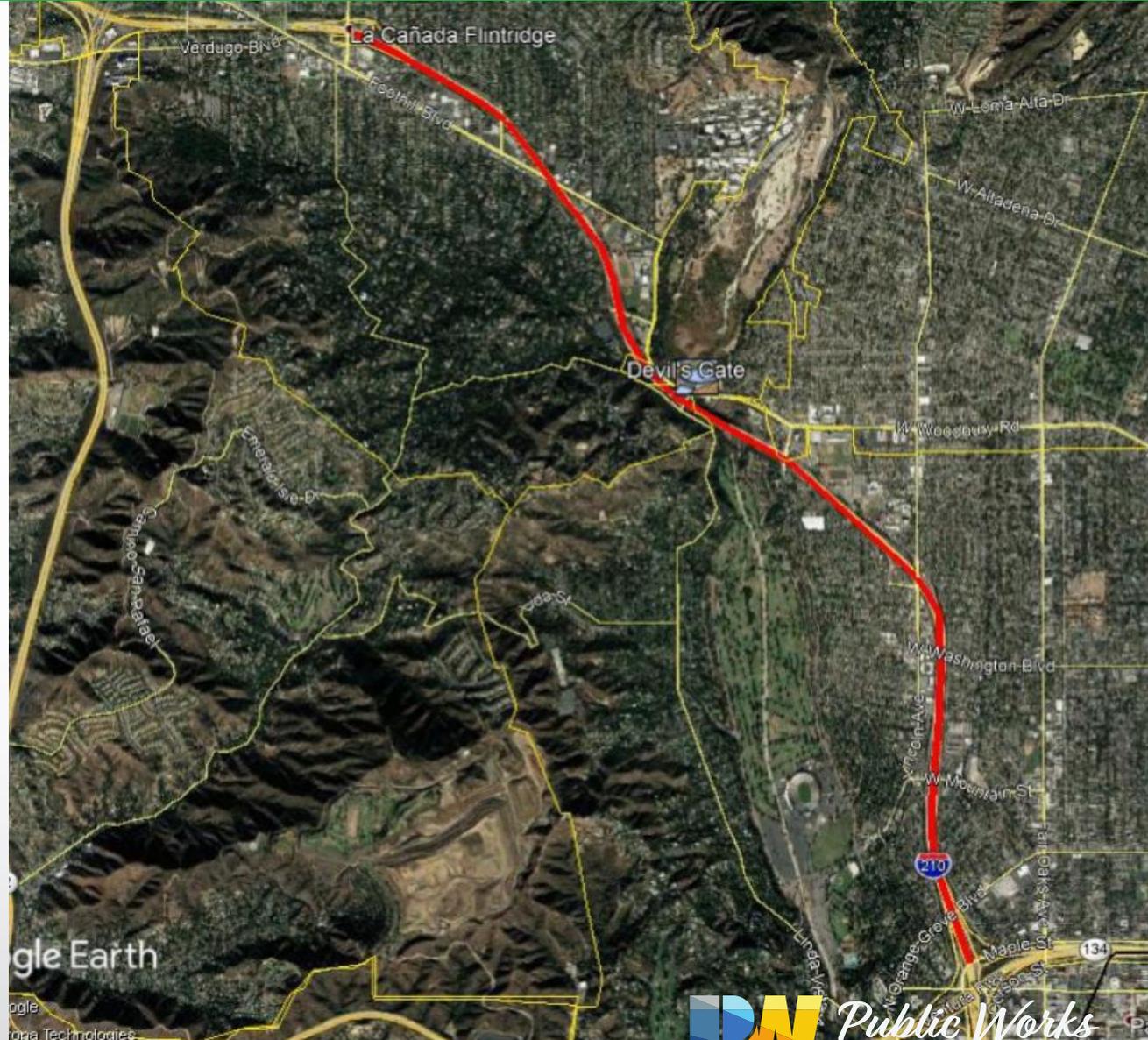
- During PSIP testing, the technician is checking to ensure the malfunction-indicator light (MIL) is not on.
- Additionally, as part of our compliance program, throughout the duration of the Project, the County will randomly check trucks to make sure the MIL is not on. If the light is on, repairs will be required before returning to the Project.





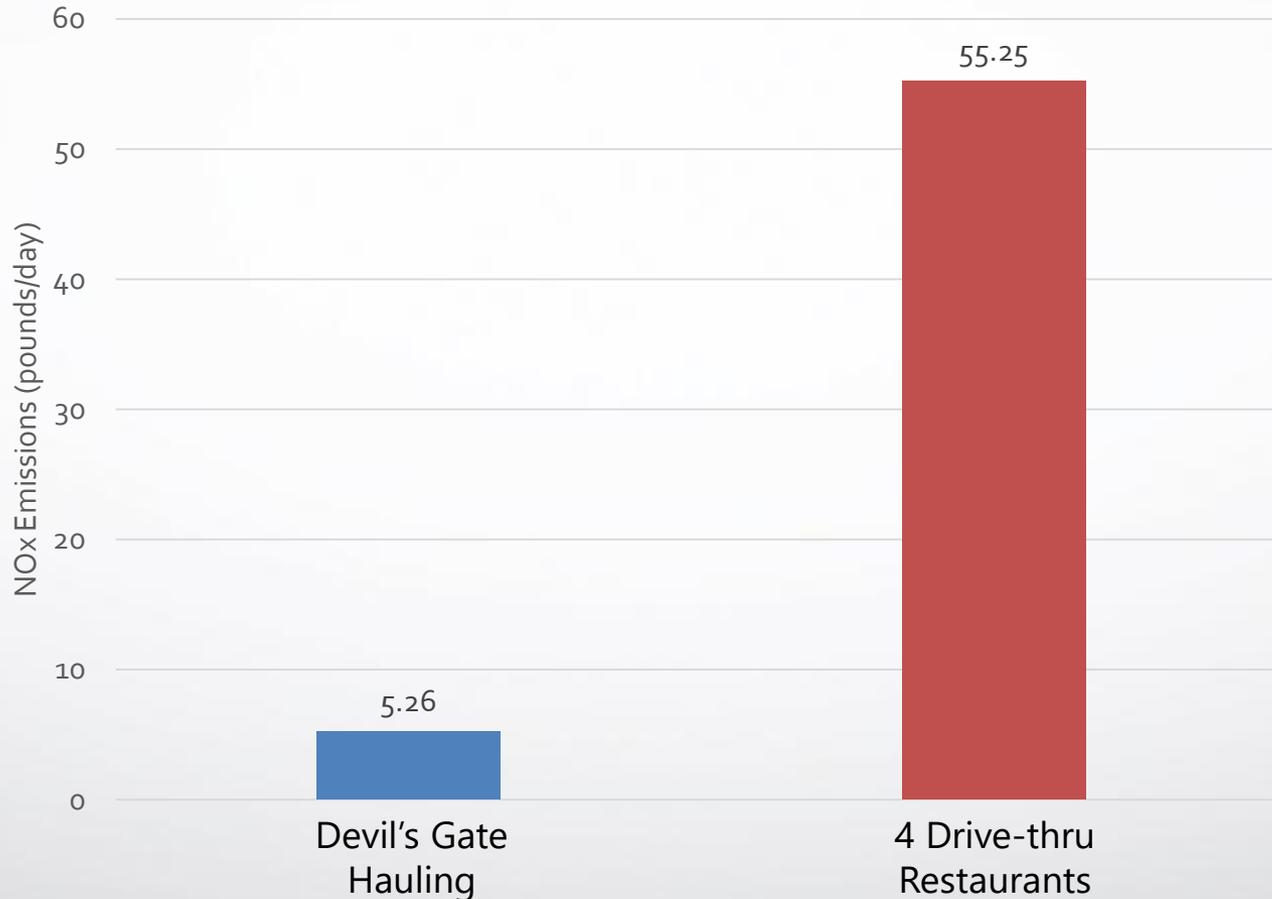
What is the true local impact?

- 5 mile stretch of I-210 between Route 2 and Route 134.
- In either direction:
 - 0.6 miles surface streets
 - 2.5 miles freeway
 - 3.1 miles traveled per trip
- **5.26 pounds** of overall 56.9 pounds daily NOx emissions within 3.1 miles of Reservoir





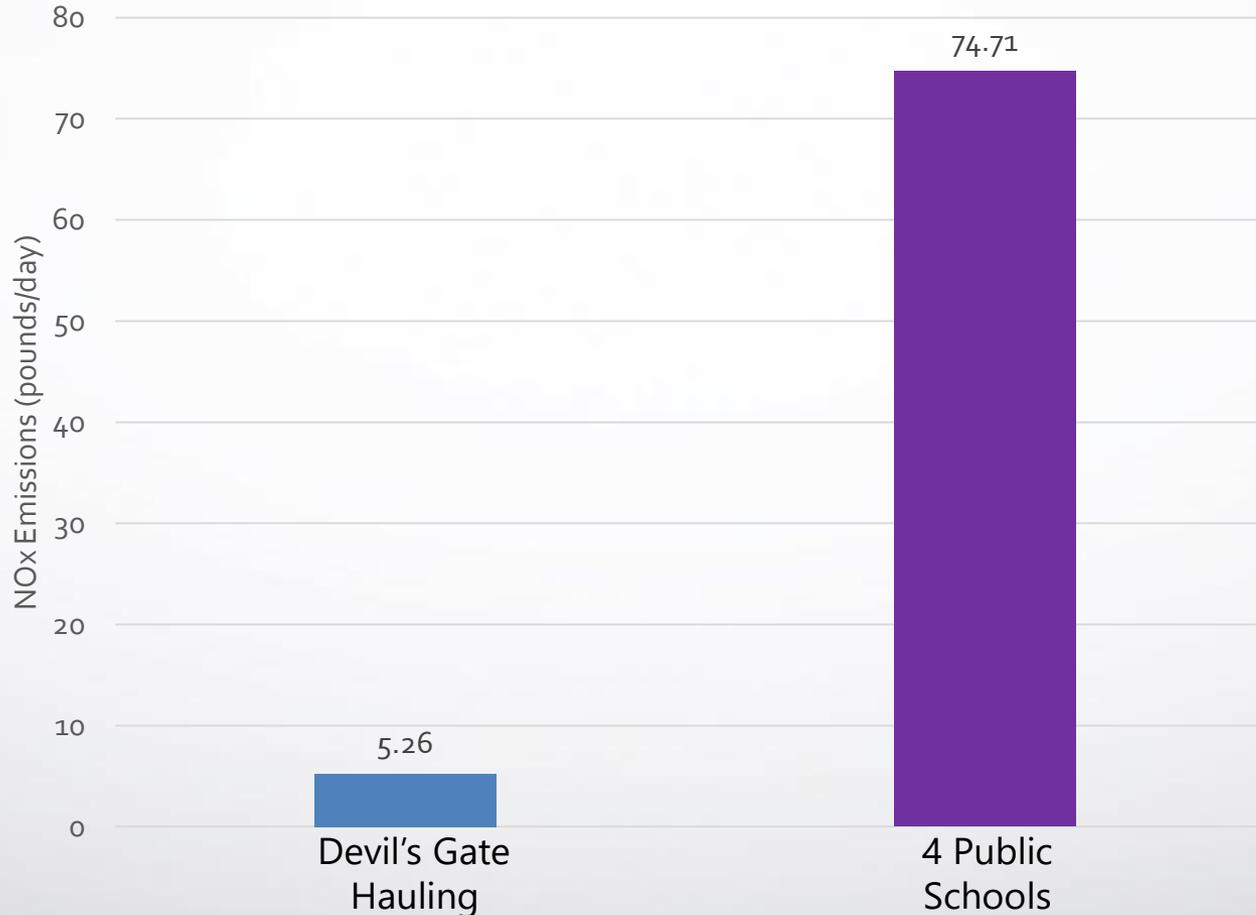
Local Daily NOx Emissions



<https://dpw.lacounty.gov/swe/devilsgate/docs/PreliminaryLocalizedHaulTruckNitrogenOxideEmissionsDemonstration.pdf>



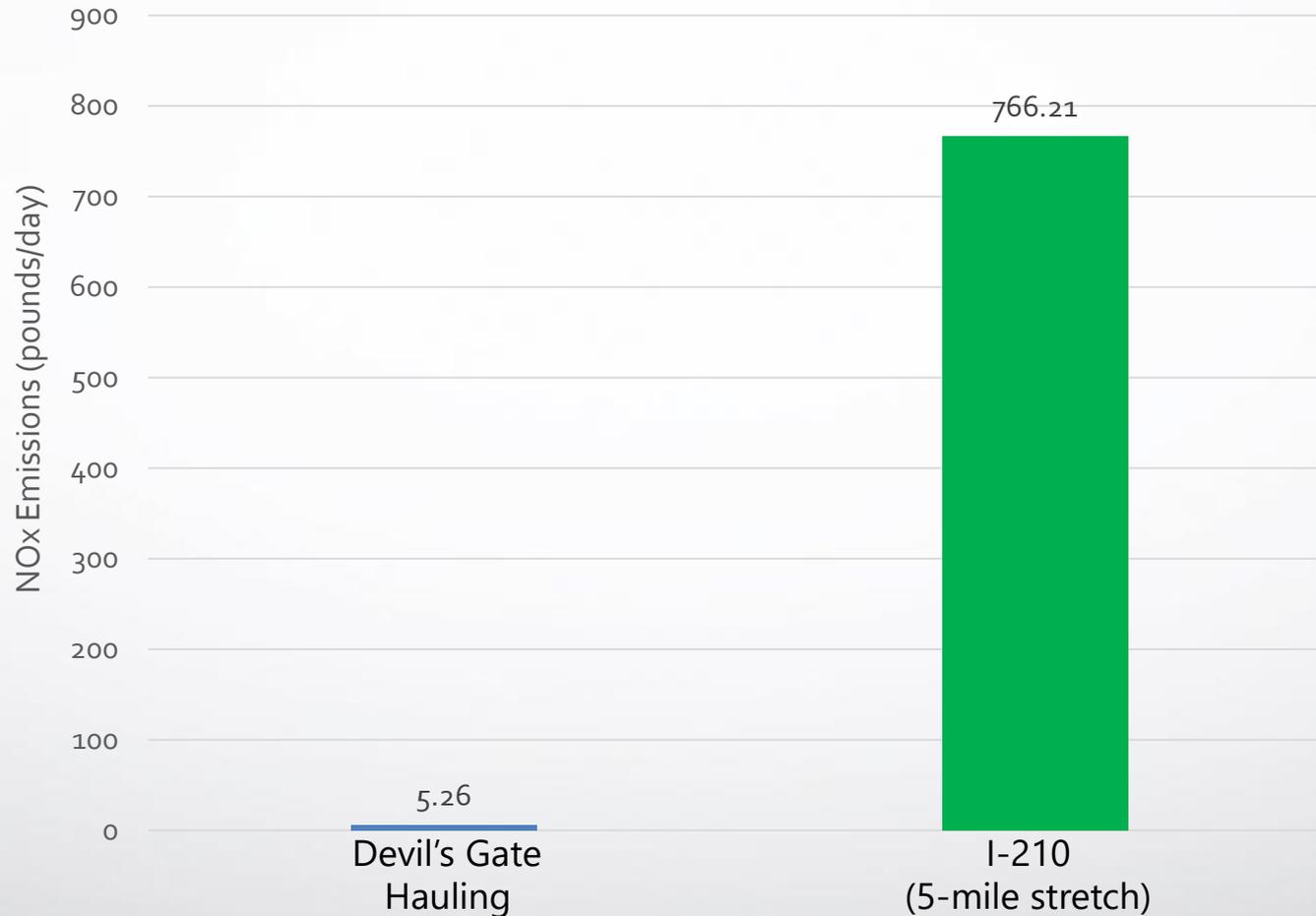
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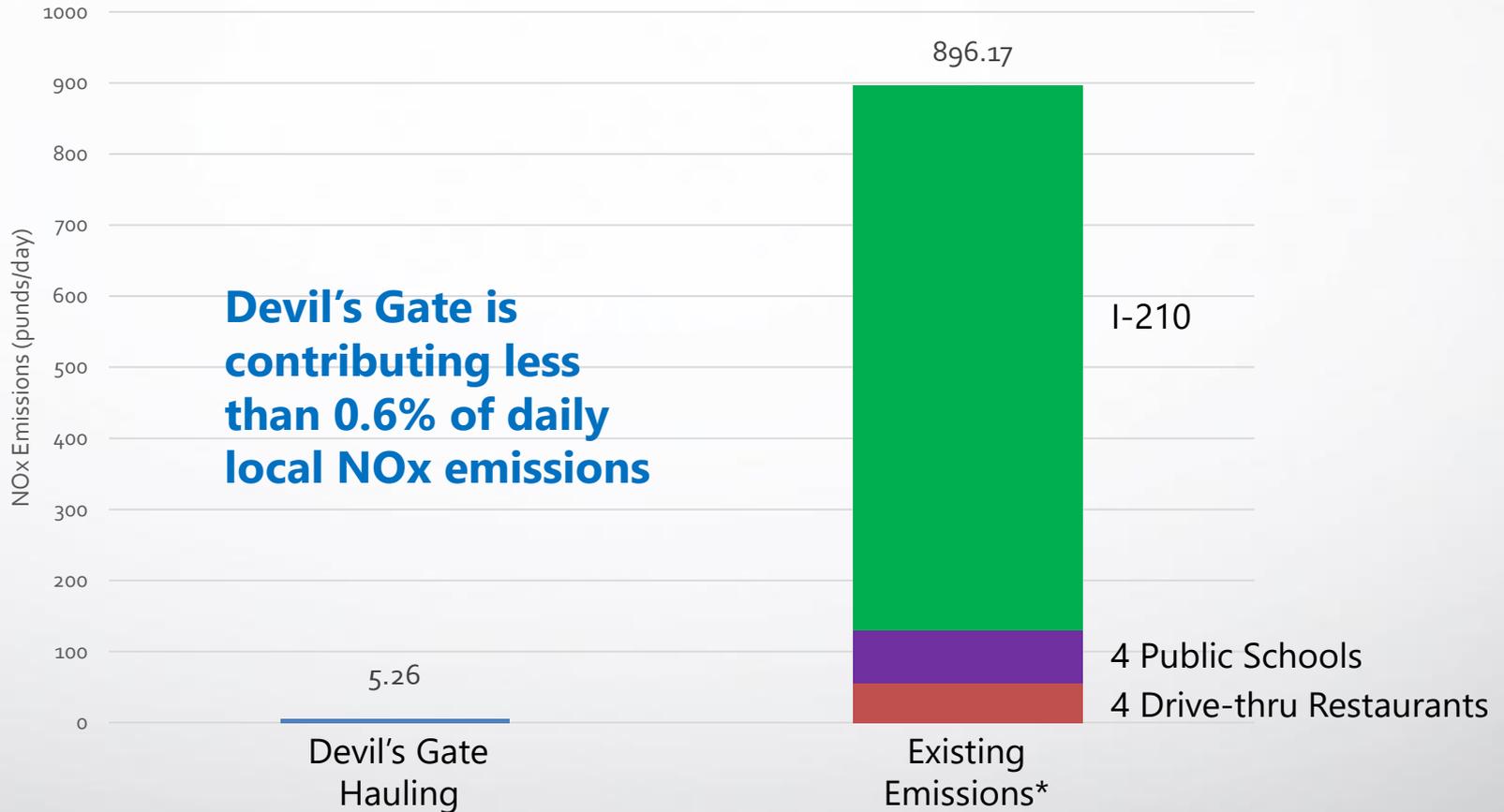
Local Daily NOx Emissions



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Local Daily NOx Emissions



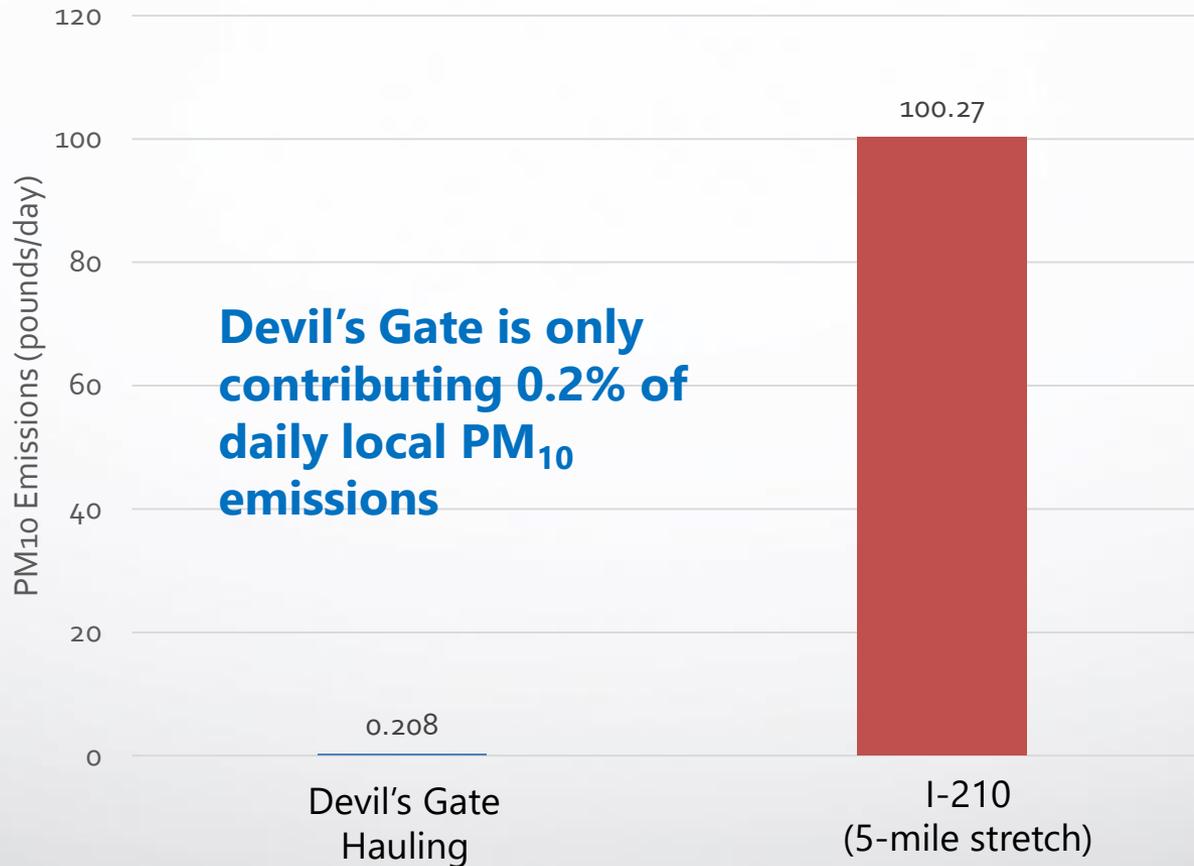
*Does not include commuter traffic, houses, or industrial facilities

<https://dpw.lacounty.gov/swe/devilsgate/docs/PreliminaryLocalizedHaulTruckNitrogenOxideEmissionsDemonstration.pdf>



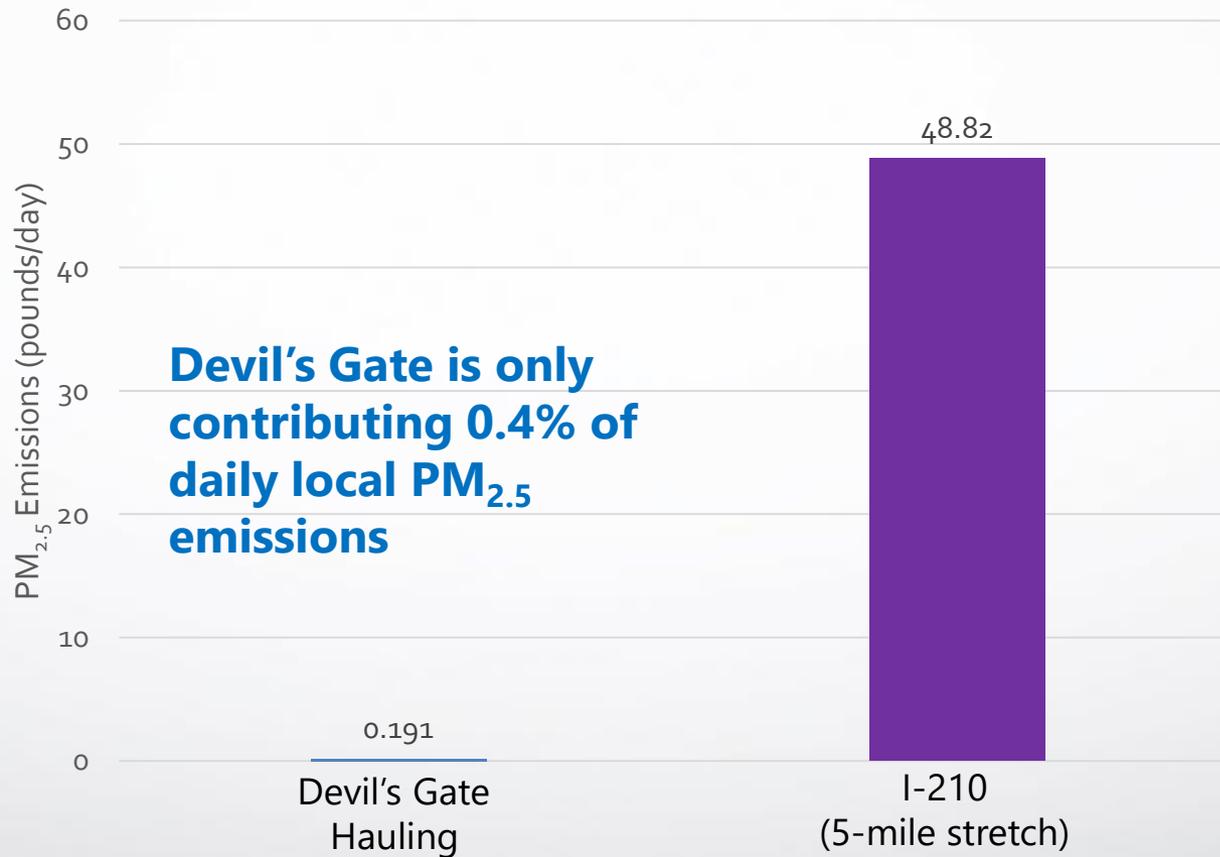


Local Daily PM₁₀ Emissions





Local Daily PM_{2.5} Emissions





Above and Beyond – Off Road Equipment

- Public Works will ensure 75 percent of the equipment to be used on the project is Tier 4. Public Works will strive to exceed this percentage when possible.
- Compliance verification information can be found here:
<https://dpw.lacounty.gov/sw/e/devilsgate/docs/OffRoadEquipmentInventory.pdf>





Above and Beyond

- **Equipment & Truck Idling Plan** - <https://dpw.lacounty.gov/swe/devilsgate/docs/DraftEquipmentandTruckIdlingPlan.pdf>
- **Fugitive Dust Control Plan** – AQMD is in the process of reviewing

Devil's Gate Reservoir Restoration Project

Draft Equipment and Truck Idling Plan

Prepared by:

Los Angeles County
Public Works



April 30, 2019



Above and Beyond

Oak Grove Drive/Berkshire Place Signal Improvements

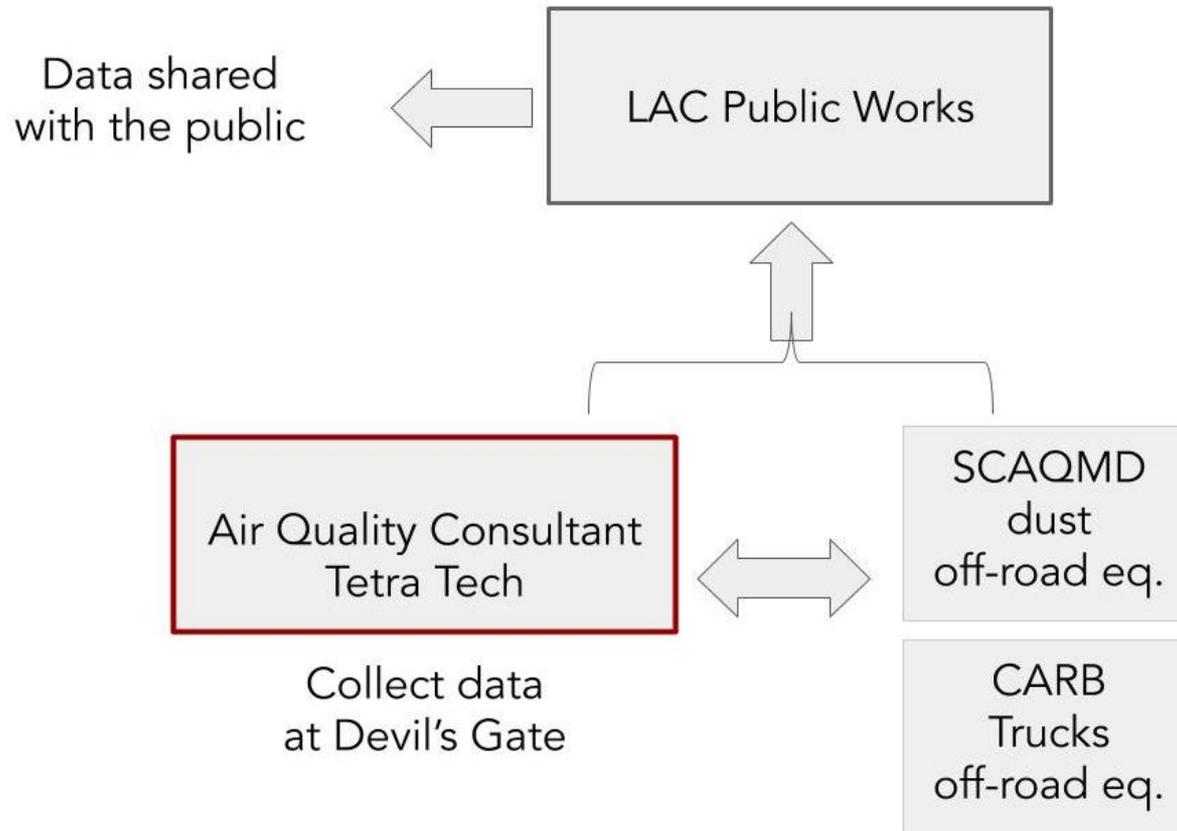
- La Canada Flintridge & Pasadena have approved plan. Currently in the process of securing a contractor to perform the work.
- Incorporation of left turn phasing for trucks traveling NB on Oak Grove Drive.
- Until the modifications are completed, LA County Sheriff will control traffic through intersection during peak hour (2:30 - 3:30 pm) daily during hauling





April 2, 2019 LA County Board Motion

Hiring of air quality consultant to place devices and monitor the Project





Draft Air Quality Monitoring Workplan

Station ID	Sampling Station	Parameter Measured
1	Upwind from Freeway (afternoon) / upwind of Site (night)	- PM ₁₀ , PM _{2.5} , and BC - NO _x - wind speed, wind direction, temperature, humidity
2	Upwind from Freeway (afternoon) / downwind from Site (night)	- PM ₁₀ , PM _{2.5} , and BC - NO _x - wind speed, wind direction, temperature, humidity
3	Perimeter monitoring	PM ₁₀ , PM _{2.5} and BC
4	Perimeter monitoring	PM ₁₀ , PM _{2.5} and BC
5	Perimeter monitoring	PM ₁₀ , PM _{2.5} and BC
6	Community monitoring	- PM ₁₀ , PM _{2.5} and BC - NO _x - wind speed, wind direction, temperature, humidity

<https://dpw.lacounty.gov/swe/devilsgate/docs/PreliminaryComplianceMonitoringandAmbientAirMeasurementsWorkplan.pdf>





Handouts

devilsgateproject.com

- Resources Tab
 - Community Resources
 - Protecting Communities
 - Biological Resources
 - Environmental Analysis
 - Project Approvals
 - EIR
- Sign up for email blast project updates

Devil's Gate Reservoir Restoration Project - Hauling Process

A Responsible Approach to Sediment Removal

devilsgateproject.com

devilsgateproject@dpw.lacounty.gov

Hotline (626) 458-2507



Project Overview

- The 2009 Station Fire burned more than 160,000 acres of the San Gabriel Mountains. Subsequent storms brought in more than 1.3 million cubic yards (MCY) of sediment into Devil's Gate Reservoir (enough to fill the Rose Bowl three times).
- Devil's Gate Reservoir currently lacks storage capacity for even one major debris event from natural disasters such as fires.
- Los Angeles County Public Works must remove the excess sediment behind the dam to protect downstream communities along the Arroyo Seco; these include the Cities of Pasadena, South Pasadena, northeast Los Angeles and portions of the 110 Freeway.
- Once the project is complete, the reservoir will have 3 MCY of capacity to better manage flood risk.
- Public Works will establish a permanent maintenance area that is cleaned annually to avoid large-scale sediment removal projects in the future.



Enhancing Flood Protection through Sediment Removal

The excess sediment in Devil's Gate Reservoir could prevent the dam from doing its job, putting lives and property at risk. The sediment threatens to block the valves that allow dam operators to release stormwater in a controlled manner. For the past nine years, Public Works has engaged with local cities, businesses, non-profits, community organizations and stakeholders sharing information and listening to concerns. The sediment removal process will begin in April 2019.



Reducing Impacts with Hauling and Construction Requirements

Hauling Equipment: Public Works is taking numerous steps to minimize the project's impact, including the use of diesel trucks for hauling that meet or exceed the U.S. Environmental Protection Agency's 2010 emission standards. The following project elements have been incorporated to minimize impacts:

- New access ramps will keep sediment hauling away from residential areas.
- A temporary sound barrier will be built for the new entrance ramp being built from Oak Grove Drive.
- All hauling will be limited to Monday - Friday, 7 a.m. - 3:30 p.m., and only on weekdays. No hauling on weekends, holidays, or during major Rose Bowl events.





Additional Impacts Reduced

Measures to reduce impacts:

- New access ramps will keep sediment hauling away from residential streets
- A temporary sound barrier will be built for the new entrance access ramp built from Oak Grove Drive
- Hauling Operations:
 - ✓ April thru October (November if weather permits)
 - ✓ Monday-Friday, from 7 a.m. to 3:30 p.m.
 - ✓ Low-emission trucks
 - ✓ No work on weekends, City of Pasadena holidays or major Rose Bowl events
 - ✓ No truck staging on city streets
 - ✓ Enforcement of BMPs
 - ✓ Construction inspection team on site
 - ✓ Truck routes balanced between cities of Pasadena and La Cañada Flintridge



Talk to Us

Questions?

For More Information:

Subscribe to our e-mail list to receive updates on the project.



www.DevilsGateProject.com



devilsgateproject@dpw.lacounty.gov



Hotline: (626) 458-2507

