

Volkswagen Environmental Mitigation Trust for California

Public Workshop on Developing a Beneficiary Mitigation Plan

Sacramento | Fresno | Oakland | Redding | Diamond Bar | Fontana

February / March 2018



Workshop Agenda

Time	Topic
30 minutes	Introduction and Overview
30 minutes	Recommended Eligible Mitigation Actions, Estimated Emission Reductions, and Implementation Options
1 hour	Open Discussion

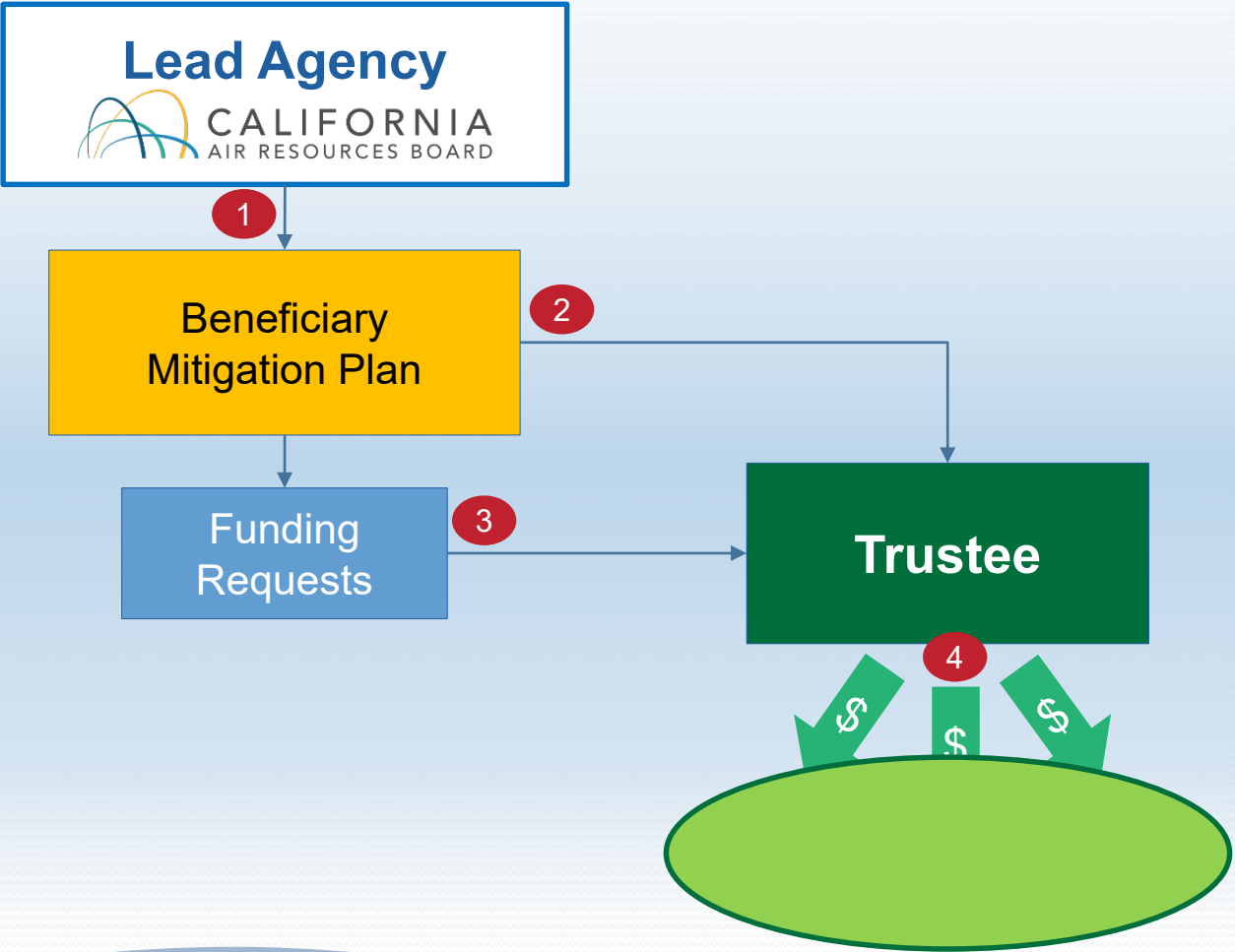
Introduction and Overview

Volkswagen (VW) Settlement

- 2 Consent Decrees covering 2.0-liter and 3.0-liter VW diesel vehicles
- Consists of main body & 4 appendices
 - Appendices A & B: Specifies buyback, lease termination, and potential vehicle modification terms
 - Appendix C: Specifies VW's ZEV Investment Commitment
 - **Appendix D: Specifies \$3 billion (\$423M for California) Mitigation Trust to address past and future excess emissions of Nitrogen Oxides (NOx)**
- Civil penalties addressed in 3rd consent decree



How the Trust Works



Beneficiary Mitigation Plan

- CARB will develop the Plan with public input
- Summarizes how California plans to use its Trust allocation
 - Overall goal for the use of the funds
 - Categories of eligible NOx mitigation actions to be funded and the corresponding allocations for each
 - Consideration of potential air quality benefits on areas disproportionately impacted by air pollution
 - Expected emission reductions
- May be updated as necessary

Legislative Direction: Senate Bill 92

- Passed in June 2017
- Directs CARB to strive to ensure that:
 - 35 percent of California's allocation benefit low-income or disadvantaged communities
 - The expenditures align with the state's priorities and provide for public transparency before approval
- Annual report to the Legislature

Current Status

- Opened public comment docket on September 20, 2017
 - ~40 unique comment letters and >4,000 form letter comments received
- Public workshop on October 9, 2017
- Update at public Board meeting on October 26, 2017
- California officially designated as Beneficiary of the Trust on January 29, 2018
- The Trust will be fully funded in November 2018

Policy and Statutory Drivers for Beneficiary Mitigation Plan Development

- State Implementation Plan
- Zero-Emission Vehicle mandates
- Sustainable Freight Action Plan
- Mobile Source Strategy
- Cut petroleum use in half by 2030
- SB 92: disadvantaged or low-income community targets

Guiding Principles

- Fully mitigate NOx, reduce risk to children, and ensure at least 35% of funds benefit disadvantaged or low-income communities
- Align with State priorities
- Zero-emission where available; low NOx everywhere else
- Surplus to regulations and additional to other funding
- Investment across geographic regions statewide with transformation of heavy-duty sector
- Implement with known method of public process, competitive solicitations, and project management
- Ensure accountability and transparency

NOx Target

- 10,000 tons
 - Assumes 85 percent recall or buy-back by mid-2019
 - Accounts for uncertainties:
 - market demand
 - types of projects that could be funded
 - infrastructure needs
 - Staff used 10,000 tons as target in determining funding recommendations



Recommended Categories and Allocations



Beneficiary Mitigation Plan Funding Recommendations

Eligible Mitigation Action (Project) Category	Allocation (millions)	Disadvantaged or Low-Income Community Benefit
Transit, School, Shuttle Buses - zero-emission	\$130	50%
Class 8 Freight and Port Drayage Trucks - zero-emission	\$90	50%
Zero-Emission Freight / Marine - Forklifts and Port Cargo Handling Equipment, Airport GSE, Shorepower	\$70	75%
Combustion Freight / Marine - Low NOx Class 7-8 trucks, Tier 4 Freight Switchers, Tier 4 or Hybrid Ferries/Tugs	\$60	50%
Light-Duty ZEV Infrastructure	\$10	35%
Admin Reserve	\$63	
Total	\$423	> 50%

Transit, School, and Shuttle Buses

Recommended Allocation: \$130 million

- Supports early adoption of commercially available Class 4-8 zero-emission technologies and reduces diesel's harmful impact on children



Transit Bus	School Bus	Shuttle Bus
Battery: Up to \$180,000* Fuel Cell: Up to \$400,000*	Battery: Up to \$400,000*	Battery: Up to \$100,000*

* Not to exceed 75 percent for non-government owned or 100 percent for government owned

- 2009 or older bus replacements
- Staff estimates at least 50% of allocation will benefit disadvantaged or low-income communities



Class 8 Freight & Port Drayage Trucks

Recommended Allocation: \$90 million

- Focus on later/future deployment of zero-emission technologies for heavy heavy-duty trucks



Class 8 Truck Years 3-5

Up to \$200,000*

To be re-evaluated as costs decrease*

* Not to exceed 75 percent for non-government owned or 100 percent for government owned

- 2009 or older model year replacements
- Staff estimates at least 50 percent of allocation will benefit disadvantaged or low-income communities

Zero-Emission Freight / Marine

Recommended Allocation: \$70 million

- Funds the most cost-effective zero-emission freight or marine projects to ensure NOx reductions while supporting deployment of early commercial zero-emission technologies

Airport GSE	Forklifts & Port Cargo Handling Equipment	Shorepower
Up to full incremental cost*	Up to \$175,000*	Up to \$2.5 million*

* Not to exceed 75 percent for non-government owned or 100 percent for government owned

- At least 75 percent of allocation will benefit disadvantaged or low-income communities



Combustion Freight / Marine

Recommended Allocation: \$60 million

- Funds the most cost-effective, low NOx or cleanest available combustion technologies for freight or marine sector



Class 7-8 Truck Low NOx Repowers or Replacements	Switcher Locomotive Tier 4 Repowers or Replacements	Ferry, Tug, and Tow Tier 4 or Hybrid Repowers
Up to \$60,000*	Up to \$1.35 million*	Up to \$1 million*

* Not to exceed maximum amounts in Consent Decree

- At least 50 percent of allocation will benefit disadvantaged or low-income communities



Light-Duty ZEV Infrastructure

Recommended Allocation: \$10 million

- Supports market adoption of zero-emission vehicles by enhancing funding and pace of development of infrastructure in areas not served by other funding sources



Public Charging (gov't property)	Public Charging (private property)	Non-Public Charging (workplace and multi-unit dwellings)	Public Hydrogen Fueling
Up to 100%*	Up to 80%*	Up to 60%*	Up to 25 to 33%*

* Purchase, installation, operation, and maintenance costs

- At least 35% of allocation will benefit disadvantaged or low-income communities



Estimated NOx Reductions, Program Administration and Oversight, and Next Steps

NOx Emission Reduction Scenarios

- Scenario 1: School Buses Only
 - \$360M for zero-emission and low NOx school buses
 - Total NOx reductions = 3,000 tons
 - Will not fully mitigate NOx
- Scenario 2: Zero-Emission and Cost-Effective Projects (Staff's Recommendation)
 - \$130M for zero-emission transit, shuttle, and school buses
 - \$90M for zero-emission Class 8 trucks
 - \$70M for zero-emission freight / marine
 - \$60M for combustion freight / marine
 - Total NOx reductions = 10,000+
 - Will fully mitigate NOx and support zero-emission transformation in heavy-duty sector

Estimated NOx Reductions for Recommended Projects

	50 - 100	\$30,000 - \$180,000
Class 8 Freight and Port Drayage Trucks - zero-emission	100 - 150	\$80,000 - \$95,000
Zero-Emission Freight / Marine - Forklifts and Port Cargo Handling Equipment, Airport GSE, Shorepower	30 - 50	\$130,000 - \$350,000
Combustion Freight / Marine - Low NOx Class 7-8 trucks, Tier 4 Freight Switchers, Tier 4 or Hybrid Ferries/Tugs	650 - 750	\$5,000 - \$30,000

Project Administration and Oversight

- Recommend third-party administration
 - Air districts, other government entities, or California-based non-profit organizations
 - Administer project categories statewide
- Project administrators will conduct outreach, further define projects with CARB direction, develop solicitations, process applications and issue payments, and agree to audits and reporting requirements
- Mitigation action project agreements will describe implementation details and requirements
- CARB will oversee projects
 - Direct project development
 - Conduct program reviews and audits

Next Steps



- Continue to solicit comments
- Incorporate comments for proposed Beneficiary Mitigation Plan
- Final proposed Beneficiary Mitigation Plan to the Board expected in May 2018
- Funding available as soon as late 2018 / early 2019

Contacts for the Environmental Mitigation Trust for California

Website: www.arb.ca.gov/msprog/vw_info/vsi/vw-mititrust/vw-mititrust.htm

(Link provided on website for submitting comments)

Email: vwmititrust@arb.ca.gov

Staff Lead: Lisa Williams

lisa.williams@arb.ca.gov | (916) 324-7582

Manager: Peter Christensen

peter.christensen@arb.ca.gov | (916) 322-1520

Comments & Discussion