APPENDIX D-4
BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary: Washington State
Lead Agency Authorized to Act on Behalf of the Beneficiary: Washington State Department of Ecology
(Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	Washington DERA 2022
Beneficiary's Project ID:	EMA10-FireEngine-C2
Funding Request No.	7 (updated)
Request Type: **(select one or more)**	☒Reimbursement ☐Advance ☐Other (specify):
Payment to be made to: **(select one or more)**	☒Beneficiary ☐Other (specify):
Funding Request & Direction (Attachment A)	☐Attached to this Certification ☒To be Provided Separately

SUMMARY

Eligible Mitigation Action Type	☐ Appendix D-2 item (specify): ☒ Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):

Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):
The State of Washington Volkswagen Beneficiary Mitigation Plan guides the state's selection and prioritization of projects to achieve Washington's goal to:

- Reduce emissions from diesel engines in the state where the 2.0 and 3.0 liter VW vehicles were, are, or will operate; and
- Fully mitigate the total, lifetime excess NOx emissions of the subject vehicles.

Washington's mitigation plan principles and priorities, as outlined in the state Beneficiary Mitigation Plan, are to:

- Improve air quality for communities that have historically borne a disproportionate share of the air pollution burden in Washington.
- Maximize air quality co-benefits beyond nitrogen oxide reductions.
- Maximize public health benefits.
- Accelerate adoption of electric vehicles, equipment, and vessels.
- Promote electrification technologies in public transportation fleets.

- Accelerate fleet turnover to the cleanest engines.
- Achieve substantial additional emissions reductions beyond what would occur absent trust funding.
- Ensure cost-effectiveness.
- Leverage additional matching funds.

Washington's Beneficiary Mitigation Plan permits up to 5% (approximately $5 million) of Washington's federal settlement in the DERA category (Mitigation Action Item 10). This partnership has the following benefits:

- Allows for funds to be leveraged from 3 sources (Federal DERA funds, VW Settlement funds, and grantee match contributions) which would increase funding for larger projects
- Creates administrative efficiencies in the state VW and DERA programs
- Incentivizes electrification of public fleets in Washington

The mitigation plan identifies accelerating fleet turnover to the cleanest engines (in this case, electric) as a priority. Specifically, emergency vehicles, such as fire apparatus, are present in every community, though there are not yet any electric emergency apparatus in the state. Ecology proposes contributing up to $5 million of the Settlement Funds to match DERA 2022 to fund scrapping and replacing diesel fire apparatus with electric fire apparatus and associated charging infrastructure. This project will serve as a model program for the state of Washington for electrifying emergency fleets

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

Mitigation Action Item 10 (DERA Option) outlines that beneficiaries may use trust funds for nonfederal voluntary match, allowing use for actions not specifically identified in Mitigation Action Items 1-9. Specifically, this request focuses on using VW funds to match federal DERA funds to administer competitive grants to scrap and replace diesel fire apparatus with electric fire apparatus and install associated charging infrastructure.

All projects will meet EPA requirements for vehicle scrapping documentation and replacement vehicle procurement.

This project will serve as a model program for the state of Washington. Fire engines are present in every community and typically run regular, short distance circuits from their fire stations to incidents, training, events, etc. before returning to a fire station. Fire stations place high demand on their fire engines, drive significant miles, and spend significant time idling in communities (an estimated 20% of engine hours are idling hours). The short distance circuits allow for regular return to charging infrastructure, making the fleet a prime opportunity for electrification.

This project will reduce community exposure to diesel emissions, in addition to reducing firefighter exposure to indoor diesel emissions caused by starting and running vehicles inside the fire station. This grant opportunity funded the replacement of two (2) diesel powered fire apparatus with electric fire apparatus, resulting in the following annual reductions:

- 0.993 tons of NOx emission reductions
- 0.004 tons of PM2.5 emission reductions
- 222.2 tons of CO2 emission reductions

These figures were calculated using the EPA's Diesel Emissions Quantifier tool. Baseline data was obtained from a 2022 survey of Washington fire service providers.

Estimate of Anticipated NOx Reductions (5.2.3):

This action will reduce approximately 0.993 lifetime tons of NOx emissions over the lifetime of two (2) electric fire apparatus replacements.

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):

Washington Department of Ecology

Describe how the Beneficiary will make documentation publicly available (5.2.7.2).

As stated in response to paragraph #7 in Attachment A of Washington's Appendix D-3 filing, Ecology makes documents and records submitted in support of funding requests and documents and records supporting expenditures of trust funds available to the public through an online application, system, on the agency's website at ecology.wa.gov. The application provides easy-to-use access to all grant application and reporting materials for funded projects.

Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).

Cost share requirements will vary according to DERA criteria and project types. Minimum cost share requirement for each project type is as follows:

- All electric (no backup engine/range extender) = 55% minimum
- CARB certified low NOx = 65% minimum
- EPA certified = 75% minimum

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).

On February 27, 2018, Washington Department of Ecology contacted the U.S. Department of Interior, U.S. Department of Agriculture, U.S. Forest Service, U.S. Fish and Wildlife Service, and National Park Service, via email to notify them of the availability of Washington State Volkswagen Mitigation Action Funds. The notice included a link to the State Trust agreement and attachments; a link to Ecology's procedures for review, consideration, and written determination for each request of funds; and instructions to subscribe to the Washington Department of Ecology's listserv to receive up-to-date information, if desired.

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

Ecology used Washington Tracking Network's (WTN) "Diesel and Disproportionately Impacted Communities" Index to identify 14 Washington counties with disproportionately impacted communities. The "Disproportionately Impacted Communities" include those census tracts in the top 20th percentile for exposure to NOx and other diesel emissions and five socioeconomic factors: limited English, income spent on housing, no high school diploma, population living in poverty, and unemployment.

Ecology's scoring and evaluation process will use the WTN tool to prioritize projects that benefit disproportionately impacted communities.

ATTACHMENTS

(CHECK BOX IF ATTACHED)

☐ Attachment A	Funding Request and Direction.
☒ Attachment B	Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).
☒ Attachment C	Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).
☒ Attachment D	Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding $25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding $25,000.]
☒ Attachment E	DERA Option (5.2.12). [Attach only if using DERA option.]
☐ Attachment F	Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.]

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

1. This application is submitted on behalf of Beneficiary State of Washington, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
5. Beneficiary will maintain and make publicly available all documentation submitted in support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: 10/30/2025

Digitally signed by Heather Bartlett
Date: 2025.10.30 14:37:26 -07'00'

Heather R. Bartlett, Deputy Director

Department of Ecology

[LEAD AGENCY]

for

Washington State

[BENEFICIARY]

ATTACHMENT B

PROJECT MANAGEMENT PLAN, PROJECT SCHEDULE, AND MILESTONES

Milestone	**Date**
Ecology develops grant application forms for Ecology's Administration of Grants and Loans (EAGL) database	Jul – Oct 2022
Ecology Submits D-4 to Trustee for approval	Oct 2022
Ecology opens funding opportunity and notifies potential applicants via EAGL, Ecology's VW webpage, and Ecology's VW listserv	Oct 2022
Final day for grant applicants to submit grant applications via EAGL	Dec 2022
Grant partners and projects are selected	Feb 2023
Ecology and grant awardees finalize contract	Apr 2023
Ecology reviews reimbursement requests from grant awardee and provides reimbursements for projects as completed.	Ongoing through Sept 2023
Ecology submits funding direction for project and administrative cost reimbursement (on a 6-month basis)	Mar & Oct Annually
Trustee reimburses Ecology for project expenditures and administrative costs	Feb & Aug Annually
Grant awardee reports on project implementation progress to Ecology	Quarterly through Sept 2023
Ecology reports on project progress to Trustee	1/31 & 7/30 Annually
Ecology completes mitigation actions and submits final project report to the Trustee	Sept 2028

PROJECT BUDGET

Period of Performance: October 2022 – September 2028

Budget Category	Total Estimated Costs	Share of Total Costs to be Funded by Trust	EPA Allocation	Mandatory Cost Share
1. Equipment Expenditure	$4,942,933.44	$683,184.36	$552,549.00	$3,707,200.08
2. Contractor Support	$0	$0	$0	$0
3. Sub-recipient Support	$0	$0	$0	$0
4. Administrative (12%)	$81,982	$81,982	$0	$0
Project Totals	**$5,024,915.56**	**$765,166.48**	**$552,549.00**	**$3,707,200.08**
Percentages	**100%**	**15.22%**	**10.99%**	**73.77%**

PROJECTED TRUST ALLOCATIONS

	Project Period Jul 2023 – Jan 2028
1. Total Beneficiary Funds	$112,745,650.15
2. Anticipated Total Project Funding Requested to be paid through Trust	$765,166.48
3. Anticipated Total Cost Share	$3,707,200.08
4. Anticipated Total Project Funding (line 2 plus line 3)	$4,472,366.56
5. Total Funding Allocated to Beneficiary (total of approved D-4s)	$96,500,000
6. Total Funding Allocated to Beneficiary, inclusive of Current Action (line 2 plus line 5)	$97,265,166.48
7. Beneficiary Funds Remaining (line 1 minus line 5)	$16,245,650.15
8. Net Beneficiary Funds Remaining, including current funding action (line 7 minus line 2)	$15,480,483.67

ATTACHMENT C

DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION IMPLEMENTATION (5.2.11)

The Washington Department of Ecology, as the lead agency for the state of Washington implementing the Environmental Mitigation plan, will provide detailed reporting on this funding request in two ways: (1) timely updates to the Department of Ecology's Volkswagen Federal Enforcement Action website; and (2) semi-annual reports to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries.

The Department has established a public VW website that will host detailed implementation reporting information. The public website, https://ecology.wa.gov/Air-Climate/Reducing-Greenhouse-Gas-Emissions/Investing-in-cleaner-transportation/Washington-s-investment-plan, was created to provide information related to the Trust, the VW partial Consent Trust Decrees, Washington's plans, and implementation information. To provide transparency and accountability, the Department of Ecology will make publicly available all the required documentation under Paragraph 7 of the Appendix D-3 Certification for Beneficiary Status form.

The Department will comply with the reporting obligations listed in the Environmental Mitigation Trust Agreement for State Beneficiaries in subparagraph 5.3, reporting to Trustee on the status of and expenditures associated with the Mitigation Actions completed and underway within six months of the first disbursement and then January 30th and July 30th thereafter.

The Department of Ecology will periodically evaluate implementation of the Beneficiary Mitigation Plan and will determine whether any revisions to the Beneficiary Mitigation Plan and funding levels are appropriate or necessary.

ATTACHMENT D

DETAILED COST ESTIMATES FROM SELECTED OR POTENTIAL VENDORS FOR EACH PROPOSED EXPENDITURE EXCEEDING $25,000 (5.2.6).

The table below outlines cost estimates for replacing diesel fire apparatus with all-electric fire apparatus or electric fire apparatus with a diesel range extender. Ecology worked with various sources to acquire cost estimates for this project and found that the cost of all electric fire apparatus to be higher than the cost of fire apparatus with a range extender engine. We expect official quotes during the application phase of this grant program and will provide official costs for projects in Washington's upcoming semiannual report (January 2023).

Expenditure	**Estimated cost**
Charging equipment and installation costs	$350,000
Fire Apparatus cost	$1,200,000 - $2,000,000
Total project cost	$1,550,000 - $2,350,000

FISCAL YEAR 2022

STATE CLEAN DIESEL GRANT PROGRAM

WORK PLAN AND BUDGET NARRATIVE FOR WASHINGTON STATE

August 3, 2022

****

SUMMARY PAGE

Project Title: Washington State Clean Diesel Program

Project Manager and Contact Information

Organization Name: Washington State Department of Ecology

Project Manager: Ron Stuart

Mailing Address: PO Box 47600, Olympia, WA 98504-7600

Phone: (360) 407-6870

Fax: (360) 407-7534

Email: Ron.Stuart@ecy.wa.gov

Project Budget Overview:

	FY 2022
EPA Base Allocation	$368,366.00
State or Territory Matching Funds (if applicable)	$683,184.36
EPA Match Incentive (if applicable)	$184,183.00
Mandatory Cost-Share	$3,707,200.08
TOTAL Project	**$4,942,933.44**
Additional Leveraged Resources	$0

** Estimate based on allowed funding amount and estimated total cost of project. Amount may go up or down.*

Project Period

October 1, 2022 – September 30, 2026

Summary Statement

Ecology will use $552,549 of federal funds and $683,184.36 of VW federal settlement funds to scrap two (2) diesel fire trucks and replace them with two (2) electric fire trucks (with back-up engines) and associated charging infrastructure.

Information on the Washington State Clean Diesel Program can be found at http://www.ecy.wa.gov/programs/air/cars/diesel_exhaust_information.htm

****

SCOPE OF WORK

Project Description

Ecology will conduct a competitive application to solicit project partners to replace diesel fire trucks with electric fire trucks, including the necessary electric vehicle charging infrastructure. Ecology will offer three levels of funding corresponding to Section X of the 2022 DERA State Grants Program Guide that sets mandatory cost share requirements for all eligible projects, including diesel vehicle replacement with EPA certified engines (75%), replacement with California Air Resources Board (CARB) low NOx engines (65%), and replacement with zero-emission vehicles (55%). The current project budget is based on diesel vehicle replacement with EPA certified engines (75%). Ecology has completed the competitive process. This is the revised DERA 2022 workplan which is being submitted with updated information.

All projects will meet EPA requirements for vehicle scrapping documentation and replacement vehicle procurement.

This project will serve as a model program for the State of Washington fire districts to electrify their fleets. Fire trucks are present in every community and typically run regular, short distance circuits from their fire stations to incidents, training, events, etc. before returning to a fire station. Fire stations place high demand on their fire trucks and drive significant miles and spend significant time idling in communities. The short distance circuits allow for regular return to charging infrastructure.

In addition to reducing community exposure to diesel emissions, this project will reduce firefighter exposure to indoor diesel emissions caused by starting and running vehicles inside the fire station.

Washington State Clean Diesel Program

The Washington State Clean Diesel Program uses Ecology's Diesel Particulate Emission Reduction Strategy for Washington State (Diesel Strategy), to reduce diesel exhaust particulate matter. A copy of our Diesel Strategy can be downloaded from Ecology's website at: https://fortress.wa.gov/ecy/publications/documents/0602022.pdf.

In developing the strategy, Ecology analyzed the many sources of diesel exhaust particulate matter and identified the ones most likely to affect public health. The goals of the strategy are to:

- decrease diesel particulate matter pollution emitted into the air; and
- reduce negative health effects of diesel particulate matter pollution, especially for:
  - children, the elderly and people whose existing health problems put them at risk (sensitive populations); and
  - economically disadvantaged communities (environmental justice communities) exposed to a higher amount of air pollution than the general population.

Key actions in Ecology's diesel strategy

1. Address existing diesel equipment

To significantly reduce diesel particulate matter pollution, we must clean up emissions from the large number of existing diesel equipment.

The most significant existing sources of diesel exhaust particulate matter in Washington are:
• Heavy duty on-road (highway) vehicles
• Non-road construction equipment
• Marine vessels and port related equipment
• Locomotive emissions (especially at switchyards near population centers)

Ecology uses a phased approach to reduce diesel particulate matter emissions from existing vehicles and equipment. This approach first focuses on reducing diesel exhaust particulate matter from the above sources in areas where the most people are located. Areas with sensitive populations and economically disadvantaged communities have priority. Then we focus on other sources that impact the general population in other areas of the state, as needed.

2. Put new technologies on old vehicles

Our efforts to reduce diesel exhaust particulate matter from existing vehicles uses technologies and programs that are both cost effective and relatively easy to implement. To achieve these goals, Ecology only installs EPA or CARB verified pollution reducing technologies. These technologies include particulate filters, oxidation catalysts, closed crankcase ventilation filters, certified engine rebuild kits, certified engine repowers, vehicle/equipment replacement, and idle reduction technologies.

There are more than 100,000 existing diesel vehicles in Washington that are suitable for exhaust retrofitting, idle reduction technologies, vehicle/equipment replacement, and engine rebuild or repower. Nearly 90 percent of these vehicles are owned and operated by the private sector.

Our Clean Diesel Program has retrofitted:
- most of the older school bus fleet able to accommodate exhaust retrofits,
- most of the public fleet able to accommodate exhaust retrofits,
- many of the contracted private fleets that provide public service,
- most fleets that operate on port properties or are associated with port activities able to accommodate exhaust retrofits.

Accomplishments of the Washington State Diesel Strategy

Started in 2002, Washington State's Clean Diesel Program has retrofitted or replaced over 10,097 vehicles and installed idle reduction equipment on over 1,792 vehicles. The program reduced approximately 75 tons of diesel particulate matter and 23,185 tons of CO2.

- School Buses: 9,110 retrofit emission control technologies on 6,430 diesel school buses, plus 998 new school bus replacements for buses too old to retrofit. Annual reduction equals 26.5 tons of diesel particulate matter. This reduces toxics exposure and public health risk for hundreds of thousands of school- age children, teachers, parents, local government employees, and citizens.
- Non-school Bus Fleets: 3,442 retrofit emission control technologies on 3,168 vehicles and 563 engine repowers or vehicle replacements. Public fleet projects include cities, counties, transit authorities, PUD, and state agencies. Private fleet projects include port cargo handling equipment, construction vehicles, and refuse trucks. Annual reduction equals 46.0 tons of diesel particulate matter.
- Other projects: Other projects include truck stop electrification for 76 spaces, replacement of 375 diesel fueled orchard heaters (smudge pots) with propane heaters, shore power for tugboats, development of truck wait time awareness systems, emission systems training for truck drivers and emission control system maintenance.

STATE/TERRITORY GOALS AND PRIORITIES:

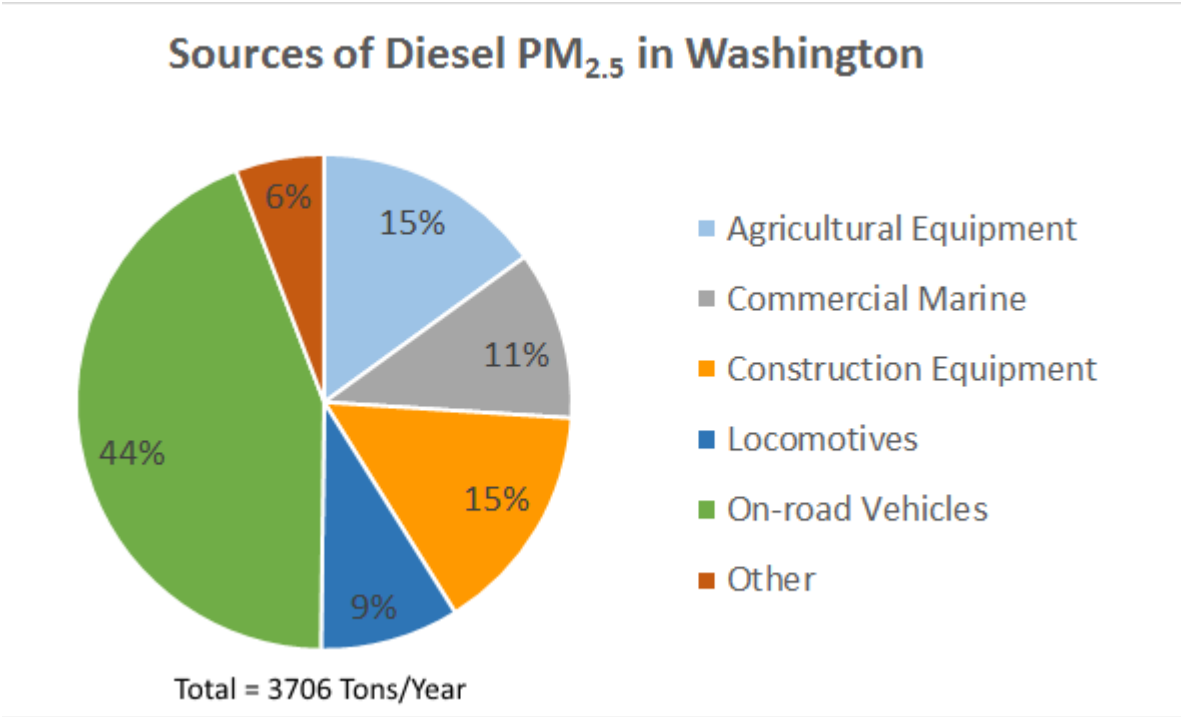
Program Priorities

Ecology targets the major sources of diesel particulate matter emissions in areas with the most sensitive populations and the highest population density. Ecology also considers those case where small dense pockets of sensitive and general population are exposed to high concentrations of diesel particulate matter emissions from smaller source categories.

Sources of data used for decision making to address harmful diesel exhaust particulate matter include:

1. Figure 1 showing sources of diesel fine particles in Washington.
2. Figures 2 & 3 showing the population density & diesel PM2.5 emission density on a 12-kilometer grid.
3. Figure 4 showing the combined diesel health risk in Washington Counties based on estimated ambient diesel PM2.5 concentrations. Combined health risk includes such health issues as premature death, heart attacks, asthma attacks, respiratory ailments, lost workdays and restricted activity days.
4. Figure 5 showing median lifetime diesel PM 2.5 associated cancer risk (cases per million persons) in Washington counties.

Figure 1 – Sources of Diesel $PM_{2.5}$ in Washington State – Year 2017.[1]



[1] Figure 1 Source: Washington State 2017 Comprehensive Emissions Inventory, WA State Department of Ecology

Figure 2 – Population Density, 2010. Calculated at the census block level.[2]

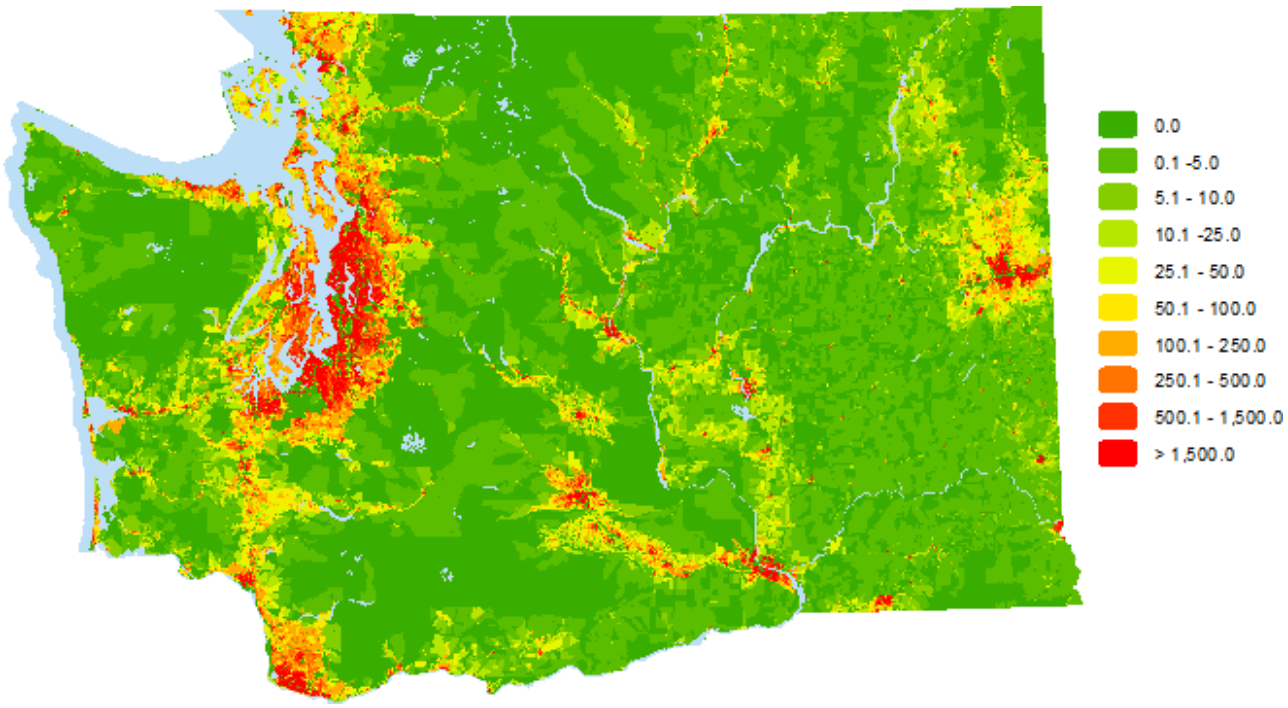
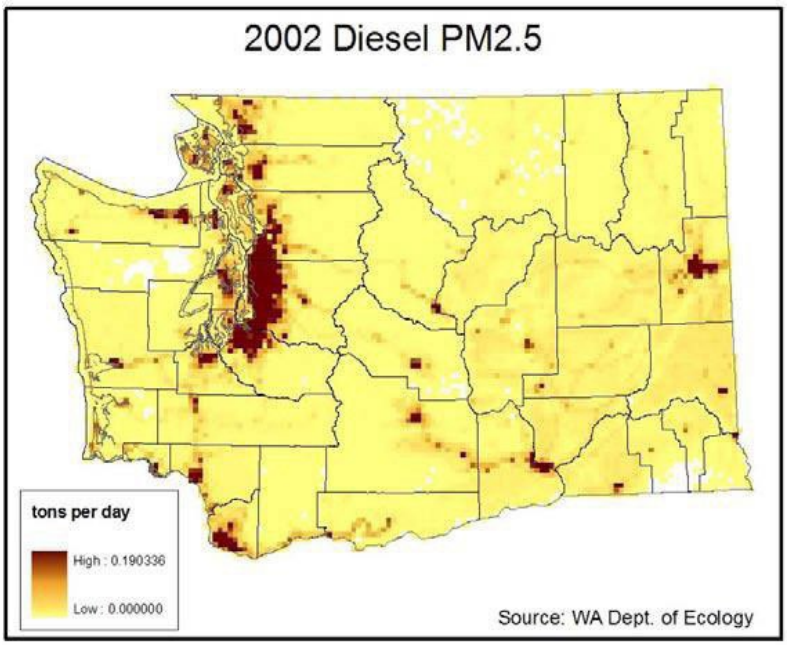


Figure 3 – Diesel PM2.5 Emission Density, 12 Km Grid – 2002F2[3]



[2] Figure 2 Source: Map created by State of Washington Office of Financial Management, Olympia, Washington

[3] Figure 3 Source: Washington State Department of Ecology, December 2006.

Figure 4 – Ranking Diesel $PM_{2.5}$ Health Risks in Washington Counties[4]

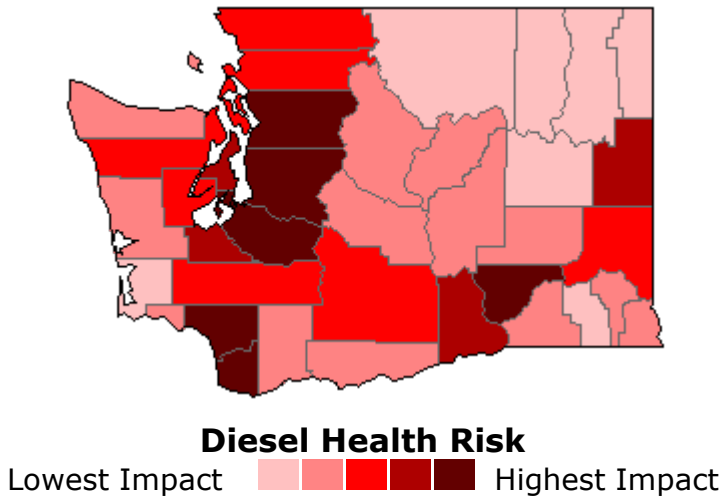
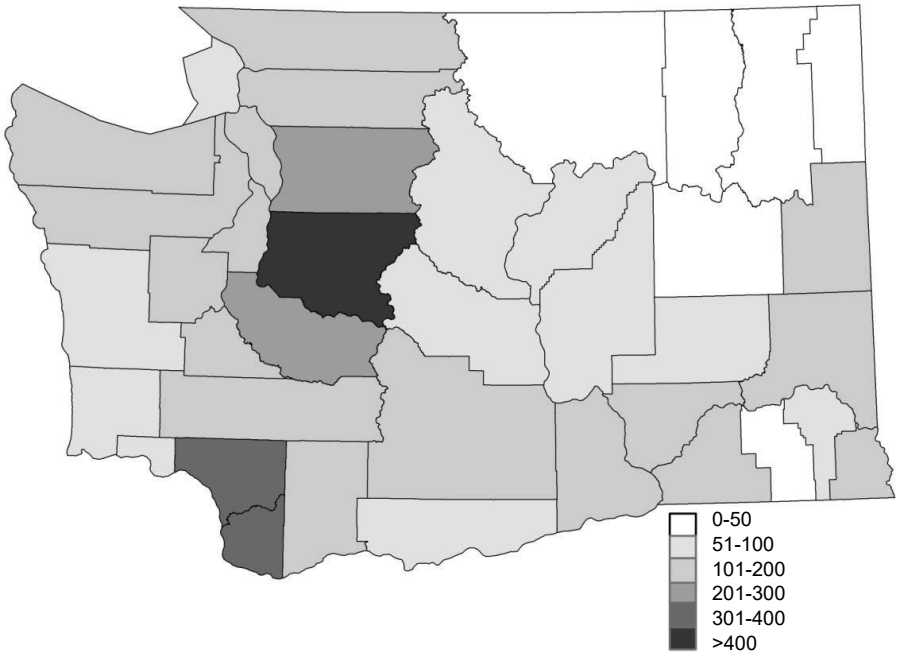


Figure 5 – Median Lifetime Diesel PM 2.5 Associated Cancer Risk (Cases per Million Persons) in Washington Counties[5]



[4] Figure 4 Source: Diesel and Health in America, Clean Air Task Force, 2005.

[5] Estimates for cancer risk were calculated by using the California Office of Environmental Health Hazard Assessment (OEHHA) diesel particulate matter cancer unit risk factor along with the USEPA's 1999 National-scale Air Toxics Assessment (NATA) population median exposure estimates for Washington state counties.

This FY2022 DERA project addresses the following program priorities:

1. Maximize public health benefits: Projects included in this grant reduce exposure to diesel emissions for the general population in urban areas, general population adjacent to and near ports, economically disadvantaged communities, and sensitive populations.

2. Are the most cost-effective:
   Based on EPA's DEQ lifetime diesel PM2.5 reduction of 0.264 tons and total project cost of $4,942,933.44, the lifetime project cost effectiveness of replacing two (2) diesel fire trucks with battery-electric units is approximately $1,099 million per ton of diesel PM2.5 reduced and $22,241 per ton of CO2 reduced. The cost effectiveness based only on the award amount of $1,235,733 is approximately $275 million per ton of diesel PM2.5 reduced and $5,560 per ton of CO2 reduced. While PM2.5 cost effectiveness is quite low, CO2 cost effectiveness demonstrated the value of this project and supports EPA's Strategic Plan Goal #1 to reduce CO2 emissions and tackle the climate crisis.

3. Are in areas with high population density, that are poor air quality areas (including nonattainment or maintenance of national ambient air quality standards for a criteria pollutant; Federal Class I areas; or areas with toxic air pollutant concerns): Our Clean Diesel Grant Program prioritizes projects based on areas that have higher background concentrations of diesel particulate matter and/or expose the most densely populated areas; including sensitive populations. See Figures 2 through 5.

   Population density information for Washington counties can be accessed on the State of Washington Office of Financial Management internet webpage for population demographics: http://www.ofm.wa.gov/pop/census2010/data.asp

4. Are in areas that receive a disproportionate quantity of air pollution from diesel fleets, including truck stops, ports, rail yards, terminals, construction sites, school bus yards and distribution centers or that use a community-based multi-stakeholder collaborative process to reduce toxic emissions: Projects included in this grant reduce exposure to diesel emissions for economically disadvantaged communities in urban areas and near ports, and sensitive populations.

5. Include a certified engine configuration or verified technology that has a long expected useful life: This project will replace diesel fire trucks with electric fire trucks. Expected useful life of these trucks is 20 years.

6. Maximize the useful life of any certified engine configuration or verified technology used or funded by the eligible entity: The transit agency and port terminal operator expects to retain the replacement equipment for approximately 20 years.

7. Conserve diesel fuel: This project will reduce fuel use by replacing diesel powered fire trucks with an electric fire trucks.

The Washington State Clean Diesel Program evaluates all projects to determine how they reduce exposure to diesel particulate matter emissions and improve public health for Washington citizens. In addition, all projects are prioritized in the following order:

1. Public fleets, including cities, counties, municipal associations, public utility districts, port

and transit authorities, and state agencies.
2. Privately owned vehicles and equipment that (a) provide and maintain public service such as refuse collection, recycling, and utilities, (b) construct public roads and buildings, and (c) operate on port properties or are associated with port activities, such as cargo handling equipment, drayage vehicles that transfer goods and materials, and harbor vessels.
3. Other privately owned vehicles and equipment that operate mainly within the state of Washington.

Washington has installed exhaust retrofits on most of our publicly owned diesel fleets. At the Ports of Seattle and Tacoma, we've installed exhaust retrofits on all of privately owned fleets that participated in our voluntary retrofit program. For our publicly owned diesel fleets, we now primarily focus on replacing diesel vehicles with electric vehicles. For our ports, we continue to focus on reducing diesel emissions from cargo handling equipment, drayage vehicles, locomotives, harbor craft, and marine vessels.

Vehicles and Technology

This project will scrap and replace two (2) diesel fire trucks with two (2) electric fire trucks. The replacement fire trucks will be purchased from a manufacturer specializing in production of electric fire trucks.

Batteries will be used to power the fire truck and water pump for all-electric zero emission operation. The fire trucks will be designed to operate primarily on electric power. Manufacturers will provide a fossil fueled generator to provide auxiliary power in the case batteries are depleted. The battery electric replacement fire trucks will have equivalent horsepower and have equivalent capacity and capable of performing the same functions as the original fire trucks.

Roles and Responsibilities

Ecology will partner with grant applicants chosen from a competitive grant application process. Under a sub-award, project partners will scrap and replace two (2) diesel powered fire trucks with electric fire trucks.

Timeline and Milestones

1. October 2022
    - EPA awards project funds to Ecology.
    - Ecology grant competitive process begins
2. January to February 2023
    - Grant partners and projects selected
    - Sub-award agreements are executed
3. February to March 2023
    - Sub-awardee's purchase new electric fire trucks
4. April 2023 to September 2026
    - Sub-awardee's receive new electric fire trucks
    - Sub-awardee's scraps the replaced diesel fire trucks
    - Sub-awardee's submit payment requests to Ecology
    - Project Period Ends
    - Ecology prepares and submits final report to EPA.

EPA's Strategic Plan Linkage and Anticipated Outcomes/Outputs

1. **Linkage to EPA Strategic Plan**

   This proposal supports EPA's 2022-2026 Strategic Plan Goal 1, 'Tackle the Climate Crisis'; Objective 1.1 'Reduce Emissions that Cause Climate Change', which states, "Aggressively reduce the emissions of greenhouse gases from all sectors while increasing energy and resource efficiency and the use of renewable energy". Specifically, the proposed activities will reduce emissions from diesel fleets, thereby reducing greenhouse gases by replacing fossil fuel engines with electric engines.

   This proposal also supports EPA's 2022-2026 Strategic Plan Goal 4, 'Ensure Clean and Healthy Air for All Communities'; Objective 4.1 which states, "Reduce air pollution on local, regional, and national scales to achieve healthy air quality for people and the environment". Specifically, the proposed activities reduce emissions from diesel fleets, thereby reducing local and regional air pollution

   EPA's Strategic 2022 - 2026 Strategic Plan may be found at:
   www2.epa.gov/planandbudget/strategicplan

2. Outputs

Ecology used the EPA Diesel Emissions Quantifier to estimate emissions and health benefit outputs for projects being undertaken for FY2022 projects.

Activity	Annual Reductions		Lifetime Reductions	
*Replace two (2) diesel-powered fire trucks with electric fire trucks	Fuel	3,951 gal	Fuel	19,755 gal
	CO2	44.4 tons	CO2	222.2 tons
	PM2.5	0.001 tons	PM2.5	0.004 tons
	HC	0.007 tons	HC	0.037 tons
	CO	0.027 tons	CO	0.134 tons
	NOx	0.199 tons	NOx	0.993 tons

* Fire truck annual emission reduction estimates are based on information provided by grantees as part of the competitive application process. Emission estimates assume 100% operation on battery.

3. Outcomes

Expected outcomes from the projects funded under this program may include, but are not limited to, the following:

- **Short-term outcomes:** This project will replace up to two (2) fire trucks in the State of Washington reducing greenhouse gases and diesel emission in local communities.
- **Medium-term outcomes**: This project is unique in the Washington State fire service. Electric fire trucks are only now entering the marketplace and this project is a model program for other state fire departments.
- **Long-term outcomes:** This project will influence all State of Washington emergency services to transform their fleets to electric.

Sustainability of the Program

Washington State has established and sustained one of the nation's most comprehensive diesel emission reduction programs. Between 2003 and 2022, Ecology has provided $103,500,000 to reduce diesel emissions. Through the Diesel Emission Reduction Act, Ecology has received another $7,000,000 from EPA.

This project provides environmental benefits that extend many years beyond the agreement period.

Ecology uses its website to inform diesel equipment owners and the public about strategies and incentives for reducing diesel emissions, and to publicize the environmental benefits of past and current projects. Ecology's diesel website can be accessed here:

http://www.ecy.wa.gov/programs/air/cars/diesel_exhaust_information.htm

Quality Assurance and Quality Control

Not applicable

****

BUDGET NARRATIVE

Itemized Project Budget

Budget Category	EPA Allocation	Voluntary State Match (if applicable)	Mandatory Cost-Share (if applicable)**
1. Personnel	$0	$0	$0
2. Fringe Benefits	$0	$0	$0
3. Travel	$0	$0	$0
4. Supplies	$0	$0	$0
5. Equipment	$0	$0	$0
6. Contractual	$0	$0	$0
7. Program Income*	$0*	$0*	$0*
8. Other*** (Sub-awards to Applicants)			
Fire Truck 1	$290,007.12	$358,571.51	$1,945,735.88
Fire Truck 2	$262,541.88	$324,612.85	$1,761,464.20
Total	**$522,549.00**	**$683,184.36**	**$3,707,200.08**
9. Total Direct Charges	$0	$0	$0
10. Indirect Charges	$0	$0	$0
Grand Total	**$552,549.00**	**$683,184.36**	**$3,707,200.08**

** If there is income from scrap value of the vehicle replacement, it will not be <u>additional</u> income, but rather will be used to reduce the amount charged for each replacement that has associated scrap income. Therefore, scrap value does not represent additional funds and for the purpose of this table is listed as $0.*

*** Mandatory Cost Share requirement is 75%*

**** Equipment costs are estimates and will be finalized through the competitive bidding process.*

Explanation of Budget Framework

Ecology will pay all costs associated with personnel, fringe benefits, travel, supplies, or equipment. Ecology will NOT charge any of these costs to the grant project funds.

Personnel: Ecology will NOT charge any salary costs to this project.

Fringe Benefits: Ecology will NOT charge any fringe benefit costs to this project.

Travel: Ecology will NOT charge any travel costs to this project.

Supplies: Ecology will NOT charge any supply costs to this project.

Equipment: Ecology will NOT charge any equipment costs to this project.

Contractual: Ecology will have purchase contracts associated with this project

Program Income: The vehicle replacements *may* generate income from scrapping of the old vehicles and engine. If so, Ecology will use the following disposition method for this income:

- Add to the funds committed to the project by EPA and recipient and used to further eligible project and program objectives.

Other: Under this category, Ecology will sub-award a funding assistance grant through the Washington State Clean Diesel Grant program.

	FY 2021	
Budget Category	**EPA**	**Voluntary State Match**
Other: Sub-award to Grant Applicants	$552,549	$683,184.36

Direct Charges
Direct charges for the FY2022 DERA projects include $552,549.00 provided by EPA.

Indirect Charges:
Ecology will NOT charge any indirect costs to this project.

Match Requirements

Ecology will use $683,184.36 of VW Settlement Funds for the match requirement.