

**APPENDIX D-4**  
**Beneficiary Eligible Mitigation Action Certification**  
**State of Hawaii**

**BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION**

Beneficiary State of Hawaii

Hawaii Department of Business, Economic Development, and

Lead Agency Authorized to Act on Behalf of the Beneficiary Tourism  
*(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)*

<b>Action Title:</b>	Action 10 DERA Project 2 Amended - Vehicle Assistance Program
<b>Beneficiary's Project ID:</b>	VW - 0010 – 0002
<b>Funding Request No.</b>	<i>(sequential)</i> 4
<b>Request Type:</b> <b>(select one or more)</b>	<input type="checkbox"/> Reimbursement <span style="float: right;"><input checked="" type="checkbox"/> xAdvance</span> <input type="checkbox"/> Other (specify): _____
<b>Payment to be made to:</b> <b>(select one or more)</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____
<b>Funding Request &amp; Direction (Attachment A)</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Attached to this Certification <input type="checkbox"/> To be Provided Separately

**SUMMARY**

<b>Eligible Mitigation Action</b>	<input type="checkbox"/> Appendix D-2 item (specify): _____
<b>Action Type</b>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal): FY 19
<b>Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):</b>	
<p>Per Hawaii's Beneficiary Mitigation Plan (BMP) Section 6.3.3, this funding request is submitted for Eligible Mitigation Action #10 - DERA Option and seeks to leverage Environmental Mitigation Trust Funds as the non-federal voluntary match for DERA FY 2019 through FY 2026. This request will build on the original Vehicle Assistance Program (VAP), which supports the replacement of diesel buses with battery electric buses, by offering financial assistance in the form of rebates to private and/or public vehicle owners looking to replace their medium/heavy duty vehicle or engine with a clean fuel alternative. While the initial intent is to focus on the medium and heavy duty buses and trucks, the program may evolve in response to market demand. Therefore, the program may expand in subsequent years to provide rebates for projects that both meet DERA guidelines and the objectives of Hawaii's BMP.</p>	

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

In partnership with the Hawaii State Energy Office in the Department of Business, Economic Development, and Tourism (DBEDT-HSEO), the Hawaii Department of Health submitted the DERA FY19 and FY20 workplan to the US Environmental Protection Agency (EPA) to replace diesel buses with battery electric buses through a vehicle assistance program. DBEDT-HSEO is now requesting the remaining funds identified in the Beneficiary Mitigation Plan for Eligible Mitigation Action 10 in order to prioritize program development, and will roll out the targeted Vehicle Assistance Programs using a portion of these funds each year. DBEDT-HSEO will use Trust Funds and EPA DERA funds to offer financial assistance to private and/or public fleet owners looking to replace older, medium/heavy duty vehicles or engines with a clean fuel alternative. The Vehicle Assistance Program will provide incentives up to the allowable cost contribution percentages under the DERA program and awarded fleet owners will provide the remaining cost-match of each battery electric bus purchase. The program may take into consideration criteria such as vehicle engine model eligibility, NOx reductions, diesel vehicle replacement, project/fleet sustainability, community benefits, and areas of service. The first cycle of this program is scheduled to open in Q3 of calendar year 2021.

The Vehicle Assistance Program is part of a larger statewide battery electric bus replacement program. Hawaii intends to leverage the state's annual DERA allocation by using Trust Funds as non-federal voluntary match to receive the EPA bonus match incentive. Hawaii has allocated funds to provide the incremental cost for the equivalent of roughly 16 eligible buses. By taking advantage of the EPA bonus match incentive, Hawaii could increase overall EPA funds coming to the state by roughly 17 percent or \$1.375 million. Adding the DERA EPA bonus match incentive to the state's DERA program budget of \$2.75 million results in an incremental contribution to the procurement of zero emission medium and heavy duty vehicles in Hawaii of roughly \$4.125 million.

The overall project will reduce emissions, improve air quality, and protect public health in targeted residential, rural, and school zones in Hawaii that are more susceptible to criteria air pollutants. Target projects such as diesel bus replacements would reduce diesel particulate matter and greenhouse gas emissions benefiting susceptible communities and improving Hawaii's air quality. The resulting emissions benefits from the EPA bonus match incentive resulting from the utilization of Hawaii's BMP DERA program could effectively increase the state DERA program's emissions benefits by 50 percent.

**Estimate of Anticipated NOx Reductions (5.2.3):**

Utilizing the EPA's Diesel Emissions Quantifier, the estimated NOx reductions is 1.445 tons over the lifetime of each bus replaced. This equates to approximately 23.12 tons for an estimated equivalent of 16 buses for the entire project.

**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):**

State of Hawaii Department of Business, Economic Development, and Tourism's Hawaii State Energy Office

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

DBEDT-HSEO created a public website, <http://energy.hawaii.gov/vw-settlement/vw> for information relating to the Trust, the VW Partial Consent Trust Decrees, Hawaii's BMP, and implementation information. To provide transparency and accountability, DBEDT-HSEO will post information on its VW website.

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

Hawaii's requested \$2,203,419 of Trust Funds for the Vehicle Assistance Program will provide incentives for up to the allowable cost contribution percentages under DERA and fleet owners will provide the remaining cost-match of each battery electric bus purchased. The program's cost share requirement was developed to fulfill the DERA FY20 program guidelines.

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

On February 23, 2018, in accordance with Paragraph 4.2.8 of the Trust Agreement, DBEDT provided a copy of the Trust Agreement with Attachments to the appropriate federal agencies; notified those agencies that DBEDT may request Trust funds for use on lands within federal custody, control, or management (including, but not limited to, Clean Air Act Class I and II areas); and, set forth the procedures by which DBEDT will review, consider, and make a written determination upon requests to use federal lands for Trust-funded projects.

**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).**

Exposure to diesel exhaust can lead to serious health conditions such as asthma and respiratory illnesses and can worsen existing heart and lung diseases, especially in children and the elderly. According to the Hawaii Health Survey, the prevalence of asthma in those 65 years and older has steadily increased since 1998. Replacing medium/heavy-duty diesel vehicles such as school buses, shuttle buses, and transit buses will reduce diesel particulate matter and greenhouse gas emissions, improve air quality, and protect public health in residential, rural, and school zones in Hawaii that are more susceptible to criteria air pollutants. While deployment location will ultimately determine how the pursued Eligible Mitigation Actions impact air quality in those locations, HSEO estimates to expend nearly 70 percent of its Trust allocation on Eligible Mitigation Actions supporting the electrification of buses that may be utilized by historically disadvantaged communities, environmental justice communities of concern, and densely populated regions, regardless of deployment location. For resources and links refer to section 6.3.3.2 in Hawaii's BMP.

**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 Hawaii,  
  
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:** Jan 28, 2021

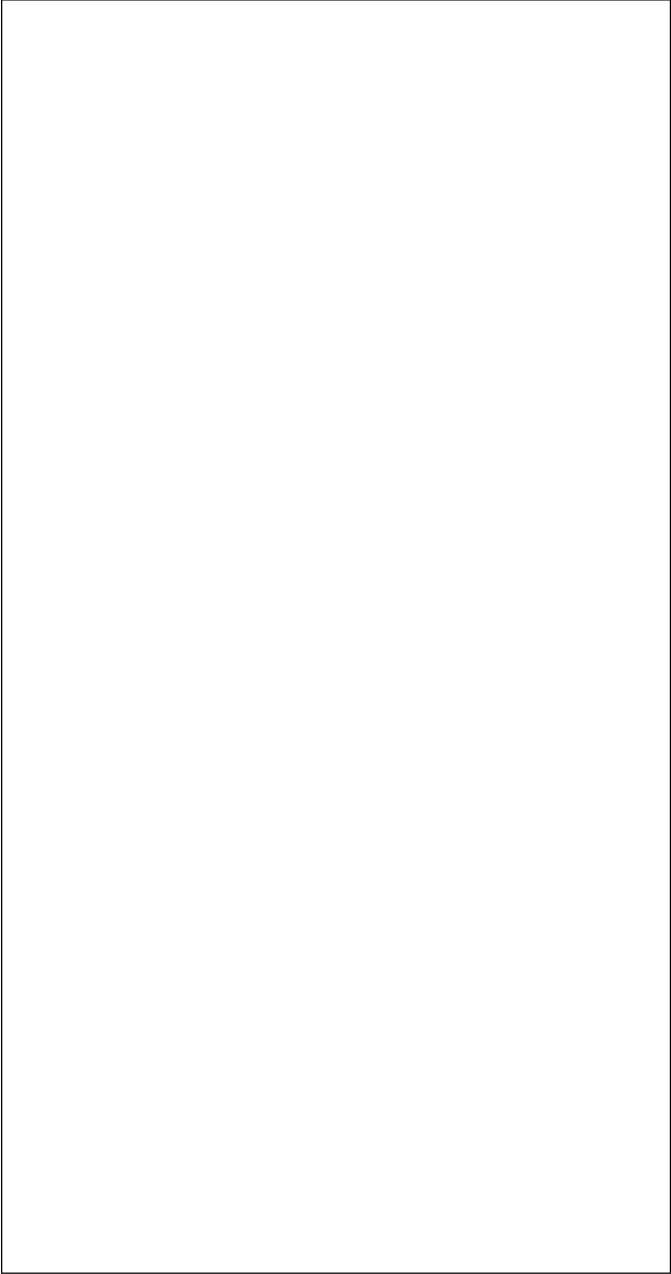
Chris Yunker  
Managing Director, Resilience, Clean Transportation, and  
Analytics, Hawaii State Energy Office

\_\_\_\_\_  
[NAME]  
[TITLE]

Hawaii Department of Business, Economic Development, and Tourism  
- State Energy Office  
\_\_\_\_\_  
[LEAD AGENCY]

**for**  
State of Hawaii  
\_\_\_\_\_  
[BENEFICIARY]

*Christopher Yunker*  
\_\_\_\_\_  
[SIGNATURE]



*[Signature Block]*

---

John Myrdal Authorized Instructor  
Hawaii State Energy Office

## Attachment B

### Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4)

**Hawaii Funding Request #4:** Action 10 DERA Project 2– Electric Vehicle Assistance Program  
**Beneficiary’s Project ID:** VW – 0010 – 0002

#### PROJECT MANAGEMENT PLAN

Hawaii’s Beneficiary Mitigation Plan (Section 6.3.3) allocates approximately \$2.75 million or 34 percent of Trust Funds to projects that contribute to Environmental Mitigation Action #10 Diesel Emission Reduction Act (DERA) Option. The Hawaii Department of Business Economic Development and Tourism – State Energy Office is submitting its fourth D-4 funding request to the Trustee for \$2,203,419. Three of the four D-4 funding requests submitted to-date will utilize 100% of the \$2.75 million of Trust Funds allocated to Environmental Mitigation Action #10 DERA Option. These funds would be drawn upon each year to fulfill the goals of the Vehicle Assistance Program (VAP) described in the cover letter. Requesting these funds in bulk allows the Energy Office to focus administrative time on programmatic actions and ensure smooth program rollout.

The VAP will be developed to fulfill the goals and requirements of the Trust and the U.S. Environmental Protection Agency (EPA) DERA program. The program may take into consideration criteria such as vehicle engine model eligibility, NOx reductions, diesel vehicle replacement, project/fleet sustainability, community benefits, and areas of service. The first iteration of the program is targeted to open in quarter 3 of fiscal year 2021

Yearly changes in the DERA base amount provided by the EPA, among other factors, will dictate the amount of VW funds spent per year. The Hawaii State Department of Health – Clean Air Branch (HDOH-CAB) will provide up to the full U.S. EPA DERA FY20 base allocation and matching incentive funds for the program. The Vehicle Assistance Program will provide rebates of up to the allowable cost contribution percentages under the DERA program for vehicle and charging equipment costs to awardees. Awardees would be required to cover the remaining cost-share. This program is anticipated to replace the equivalent of approximately 2 buses in its first year with an anticipated NOx emission reduction of 2.89 tons.

Estimated project schedule and milestones, budget, and trust allocations are included below.



**PROJECT SCHEDULE AND MILESTONES - Yearly**

Milestone	Estimated Date Quarters based on FY 2021 starting July 1,2020
Hawaii State DERA FY20 workplan approved by EPA	July 2020
HSEO develops statewide Electric Vehicle Assistance Program	FY 2021 – Quarter 2
Electric Vehicle Assistance Program public notice and open application	FY21 – Q3
Receipt and review of program applications	FY21 – Q3
HSEO submits Progress Report #1 to VW Trustee	FY21 – Q3
DERA FY20 Quarterly Report #1 Due to EPA	FY21 – Q4
Program awardee(s) announced	FY21 – Q4
DERA FY20 Quarterly Report #2 Due to EPA	FY21 – Q4
HSEO submits Progress Report #2 to VW Trustee	FY 2022 – Quarter 1
DERA FY20 Quarterly Report #3 Due to EPA	FY 2022 – Quarter 1
Battery electric buses delivered and in operation	No later than FY22 – Q1
Awardee(s) submits detailed documentation of bus scrapping, emissions reduction estimates, invoices for claimed project costs, and other supporting documents required for reimbursement	No later than FY22 – Q1
Project period for DERA FY20 award ends	FY22 – Q2
DERA FY20 Final Report Due to EPA	FY22 – Q2
HSEO reports to VW Trustee on status of any expenditures with Mitigation Actions completed and underway	FY22 – Q2

**PROJECT SCHEDULE AND MILESTONES – Through 2027**

Milestone	Estimated Time of Year
HSEO receives applications on a rolling basis	Ongoing
HSEO reviews and modifies acceptable technologies for the following fiscal year (if necessary) and markets these changes to potential applicants	Q3 of each year, as needed
HSEO submits reports to VW and EPA detailing program results	See above
HSEO wraps up program with VW, EPA, and awardees	2027

The following table details the total budget to be funded by the VW trust for the amended project 2. The original project 2 request (\$ 316,494) plus the amended request (\$2,203,419) equals the total project 2 budget (\$2,519,913).

**Project 2 Budget Overview**

Original Project 2 (D-4) submitted in July 2019	\$ 316,494
Incremental Project 2 Budget Request (this request)	\$2,203,419
<b>Total Amended Project 2*</b>	<b>\$2,519,913</b>

\*the total DERA-eligible funds allocated in the HSEO BMP is \$2.75M which is the sum of HSEO Project 1 (\$230,087) and amended Project 2 (\$2,519,913)

The table below shows the total project 2 budget of \$2,519,913 broken down between equipment expenditures and Administrative costs.

Budget Category	Budget to be Funded by the Trust
Equipment Expenditure	\$ 2,141,926
Administrative @ 15%	\$ 377,987
<b>Project Totals</b>	<b>\$ 2,519,913</b>

The two tables below detail a low and high program budget scenario, depending on whether the DOH allocates the base DERA amount to the VAP. The VW match is found by dividing total VW project 2 budget across the remaining 7 years.

Description	Project Year Estimate (Low)*	Project Year Estimate (High)*	Project Lifetime (Low)	Project Lifetime (High)
<b>Vehicle Assistance Program (Federal/State Funds @ 45%)</b>				
EPA DERA FY20 – bonus incentive	\$ 539,981	\$ 899,969	\$ 3,779,870	\$ 6,299,783
EPA DERA FY20- base amount	\$ 179,994	\$ 179,994	\$ 1,259,957	\$ 1,259,957
VW funds – voluntary match	\$ 359,988	\$ 359,988	\$ -	\$ 2,519,913
<b>Program Awardees (Mandatory Cost-Share @ 55%)</b>	\$ 659,977	\$ 1,099,962	\$ 4,619,841	\$ 7,699,734
<b>Total Project Cost</b>	\$ 1,199,959	\$ 1,999,931	\$ 8,399,710	\$ 13,999,517

\*The Low year and High year estimates are found by dividing the project lifetime estimates by 7 in order for funds to be fully spent by October 2027 (VW end date).

## Attachment C

### Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11)

Consistent with 5.2.11 of the Environmental Mitigation Trust Agreement for State Beneficiaries (Trust), Beneficiaries must submit with their Appendix D-4 request for Eligible Mitigation Action funding a detailed plan for reporting on Eligible Mitigation Action implementation. The Hawaii Department of Business, Economic Development, and Tourism Hawaii State Energy Office (DBEDT-HSEO) intends to achieve the Beneficiary Reporting Obligations as outlined with 5.3 of the Trust.

DBEDT-HSEO is devoted to carrying out the reporting requirements of the Trust, according to 5.3, Beneficiary Reporting Obligations, as described below:

For each Eligible Mitigation Action, no later than six months after receiving its first disbursement of Trust Assets, and thereafter no later than January 30 (for the preceding six-month period of July 1 to December 31) and July 30 (for the preceding six-month period of January 1 to June 30) of each year, each Beneficiary shall submit to the Trustee a semiannual report describing the progress of implementing each Eligible Mitigation Action during the six-month period leading up the reporting date (including a summary of all costs expended on the Eligible Mitigation Action through the reporting date). Such reports shall include a complete description of the status (including actual or projected termination date), development, implementation, and any modification of each approved Eligible Mitigation Action. Beneficiaries may group multiple Eligible Mitigation Actions and multiple sub-beneficiaries into a single report. These reports shall be signed by an official with the authority to submit the report for the Beneficiary and must contain an attestation that the information is true and correct and that the submission is made under penalty of perjury. To the extent a Beneficiary avails itself of the DERA Option described in Appendix D-2, that Beneficiary may submit its DERA Quarterly Programmatic reports in satisfaction of its obligations under this Paragraph as to those Eligible Mitigation actions funded through the DERA Option. The Trustee shall post each semiannual report on the State Trusts public-facing website upon receipt.

Furthermore, in addition to the semiannual reporting to the Trustee, DBEDT-HSEO in partnership with the Department of Health, Clean Air Branch (DOH-CAB) will submit quarterly and final reports to the EPA during the project period as required by the 2019-2020 DERA State Grants Program Guide described below:

- I. **Reporting Requirements:** Quarterly programmatic progress reports and a detailed final programmatic report will be required. Additional administrative and financial reporting may be required per the terms and conditions of the award.

1. **Quarterly Reports:** Quarterly report summarizing technical progress, planned activities for the next quarter and a summary of expenditures are required. The schedule for submission of quarterly reports will be established by EPA, after the grants are awarded. A template for the quarterly report will be available at <https://www.epa.gov/dera/state>.
  
2. **Final Reports:** The final report must include: summary of the project or activity, emissions benefits and other outputs and outcomes achieved, and costs of the project or activity addition, the final report shall discuss the problems, successes, and lessons learned from the project or activity that could help overcome structural, organizational or technical obstacles to implementing a similar project elsewhere. Award recipients may be provided with additional information and guidance on reporting performance measures and project progress after award. A template for the final reports is available at <https://www.epa.gov/dera/state>. The final report shall be submitted to EPA within 90 calendar days of the completion of the period of performance.

## **Attachment D**

### **Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$ 25,000 (5.2.6)**

The Vehicle Assistance Program will provide incentives to private and public fleet owners for the replacement of diesel buses with battery electric buses. The Electric Vehicle Assistance Program will fund awards of up to the allowable cost contribution percentages under the DERA program for vehicle and charging equipment costs and fleet owners will provide the remaining cost-match.

<u>Bus Style</u>	<u>Bus Cost</u>	<u>Estimated Rebate</u>
Battery Electric – School Bus	\$ 250,000	\$ 100,000
Battery Electric – Shuttle Bus	\$ 580,000	\$ 232,000
Battery Electric – Transit Bus	\$ 740,000	\$ 296,000

Charging Equipment	Variable	Up to 45% of quoted cost
--------------------	----------	--------------------------

Estimated costs reflect informal quotes collected during research and discussions with battery electric bus vendors. Contact details are withheld to conform with Hawaii State and County procurement laws. Estimated costs do not include shipping expenses and may vary based upon vehicle capacity.

## **Attachment E: DERA Workplan**

*Please note: This workplan was created for the original project 2 request. Considering the VAP will be a multi-year program, the program specifics will change from year to year.*

**FISCAL YEAR 2019-2020  
STATE CLEAN DIESEL GRANT PROGRAM  
WORK PLAN AND BUDGET NARRATIVE TEMPLATE**

---

**SUMMARY PAGE**

**Project Title: Hawaii Vehicle Replacement 2019-2020**

**Project Manager and Contact Information**

**Organization Name: Clean Air Branch, Hawaii Department of Health (DOH)**

**Project Manager: Barry Ching**

**Mailing Address: 2827 Waimano Home Road, Room 130. Pearl City, Hawaii 96782**

**Phone: 808 586-4200**

**Fax: 808 586-4359**

**Email: [barry.ching@doh.hawaii.gov](mailto:barry.ching@doh.hawaii.gov)**

**Project Budget Overview:**

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2019+2020</b>
EPA Base Allocation	\$316,494	\$329,728	\$646,222
State or Territory Voluntary Matching Funds *	\$316,494	\$329,728	\$646,222
EPA Match Incentive (Bonus)	\$158,247	\$164,864	\$323,111
Voluntary Cost Share	\$282,230	\$27,203	\$309,433
Mandatory Cost-Share	\$2,229,009	\$980,300	\$3,209,309
<b>TOTAL Project Cost</b>	<b>\$3,302,474</b>	<b>\$1,831,823</b>	<b>\$5,134,297</b>

<b>Sub-grantee</b>	<b>~ Total Cost</b>	<b>Federal + State funds *</b>	<b>Federal + State % of Total</b>	<b>Maximum Funding Limit</b>	<b>Cost-Share</b>
BWS	205,000	35,000	17%	25%	170,000
HDOT	2,000,000	281,494	14%	25%	1,718,506
HSEO	2,929,297	1,299,061	44%	45%	1,630,236
<b>TOTAL</b>	<b>5,134,297</b>	<b>1,615,555</b>			<b>3,518,742</b>

\* In each year, the Hawaii State Energy Office (HSEO) is providing the State Voluntary Match from the Volkswagen Environmental Mitigation Trust Fund (VW Trust Fund) in order to receive the EPA Match Incentive. \_\_\_\_\_



## **Project Period**

October 1, 2019 – September 30, 2022

## **Summary Statement**

The DOH will partner with three government agencies on separate vehicle replacement projects:

- Board of Water Supply, City & County of Honolulu (BWS) to replace one diesel truck with another;
- Highways Division, Hawaii Department of Transportation (HDOT) to replace one diesel Zip Mobile / Road Zipper with another; and
- HSEO Electric Vehicle Assistance (EVA) Program to replace two (2) diesel buses and three (3) medium- or heavy-duty vehicles with an equivalent number of battery-electric vehicles and charging equipment of the same category.

\*\*\*\*

## **SCOPE OF WORK**

The grant will fund projects with three agencies to replace diesel vehicles with cleaner diesel vehicles or battery-electric vehicles. The proposed projects will use the base allocation of Hawaii's Diesel Emissions Reduction Act (DERA) State grant, the 100% state voluntary match provided by HSEO, and the 50% match incentive from both FY19 and FY20 to reduce their cost shares.

The FY19 BWS project is for the early replacement of one Model Year 2001, combination dump truck with a crane. The vehicle has one engine; the crane is powered by a hydraulic pump via a power take-off connected to the truck engine. It is used to transport materials to the top of water tank reservoirs, and to transport water meters and meter boxes. The replacement will use an estimated \$35,000 in DERA federal and state funding assistance. The BWS will provide approximately \$170,000, an 83% cost-share, of the projected \$205,000 total cost.

The FY19 HDOT project is for the early replacement of a non-road diesel vehicle, known as the "Zip Mobile." The vehicle is used twice daily on weekdays to open and close carpool lanes during the morning rush hour commute along the major transit corridor between downtown Honolulu and rural areas west and north of the city (i.e., Interstate H-1). The replacement is estimated to use \$281,494 in DERA federal and state funding assistance. The HDOT will provide an estimated 86% cost-share, or \$1,718,505, to cover the projected total cost of \$2,000,000.

The FY19 HSEO project is for the development and administration of the EVA Program to offer rebates to private and public fleet owners looking to replace older, diesel buses with battery-

electric vehicles. The program is projected to use \$474,741 of DERA federal and state funding assistance to replace two (2) diesel buses with an equivalent number of battery-electric buses and support the purchase of charging equipment needed to power the vehicles.

The FY20 HSEO project is for the continued development and administration of the EVA Program to offer rebates to private and public fleet owners looking to replace older, medium-/heavy-duty vehicles with battery-electric vehicles. The program is projected to use \$824,320 of DERA federal and state funding assistance to replace three (3) medium- or heavy-duty vehicles with an equivalent number of battery-electric medium- or heavy-duty vehicles and support the purchase of charging equipment needed to power the vehicles.

The EVA Program will be a competitive solicitation and awardees will be selected based on the fulfillment of criteria factors such as engine model year and potential emissions reductions. The number of proposed vehicle replacements and proposed number of charging equipment may vary depending on awarded applicants. The EVA Program will provide rebates of approximately 44% of unit costs for both sets of vehicles and chargers. Fleet owners will provide a cost-share estimated at **\$1,630,236**.

The projects will comply with all rules and guidelines of the FY2019-2020 state DERA program and for purchasing of the City & County of Honolulu and State of Hawaii, as appropriate.

The replacement vehicles shall meet the following requirements before being contracted:

1. Products must meet the FY2019-2020 state DERA program guide requirements and the state and federal safety requirements of Model Year 2015 or later.
2. All deliveries, warranty claims, repairs, and services must be provided on the island of Oahu or the county where the project occurs.

### **Project Alternatives**

The proposed Scope of Work and budget breakdown may be amended because of two factors:

1. Due to the 2020 concerns with COVID-19, procurement and manufacturing of vehicles has been severely impacted. As a result, the DOH is requesting a waiver to the funding limit for the electric vehicle portion of the grant to allow up to 75% of the project cost to be paid by DERA funds. The change could impact the number of vehicles proposed and the total project cost.
2. Due to concerns about the reliability of the replacement zip mobile/road zipper, the HDOT has expressed concerns about their ability to scrap their existing diesel vehicle, which is a condition of the DERA subgrant agreement. If the HDOT withdraws from this DERA project, their share of funds would be allocated to the other two projects: BWS diesel replacement and HSEO EVA Program medium- and heavy-duty vehicle replacement.

If both conditions above are realized, this would result in the budget scenario below which shows the two remaining projects using the maximum funding limits. Many other options exist in which any of the vehicles receive less than the maximum percentage. This would depend on a number of factors including the actual vehicle costs and the number of vehicles to be included.

<b>Sub-grantee</b>	<b>~ Total Cost</b>	<b>Federal + State funds</b>	<b>Federal + State % of Total</b>	<b>Maximum Funding Limit</b>	<b>Cost-Share</b>
BWS	205,000	51,250	25%	25%	153,750
HSEO	2,085,740	1,564,305	75%	75%	521,435
<b>TOTAL</b>	<b>2,290,740</b>	<b>1,615,555</b>			<b>675,185</b>

Table 1.1: Planned Vehicles for Diesel Replacement										
	#	Class	GVWR	Engine Serial #	YEAR	Make	Horsepower	Model	Annual Usage (hrs/yr)	Annual Diesel Fuel Usage
BWS	1	7	TBD	1GDM7H1C71J504038	2001	Caterpillar		3126		303
HDOT	1	NA	Not available	RG6081A046949	1998	Lindsay	300	Road Zipper	1852	8,300

**Table 1.2: HSEO EVA Program for Buses and Medium- or Heavy-Duty Vehicles (Illustrative)**

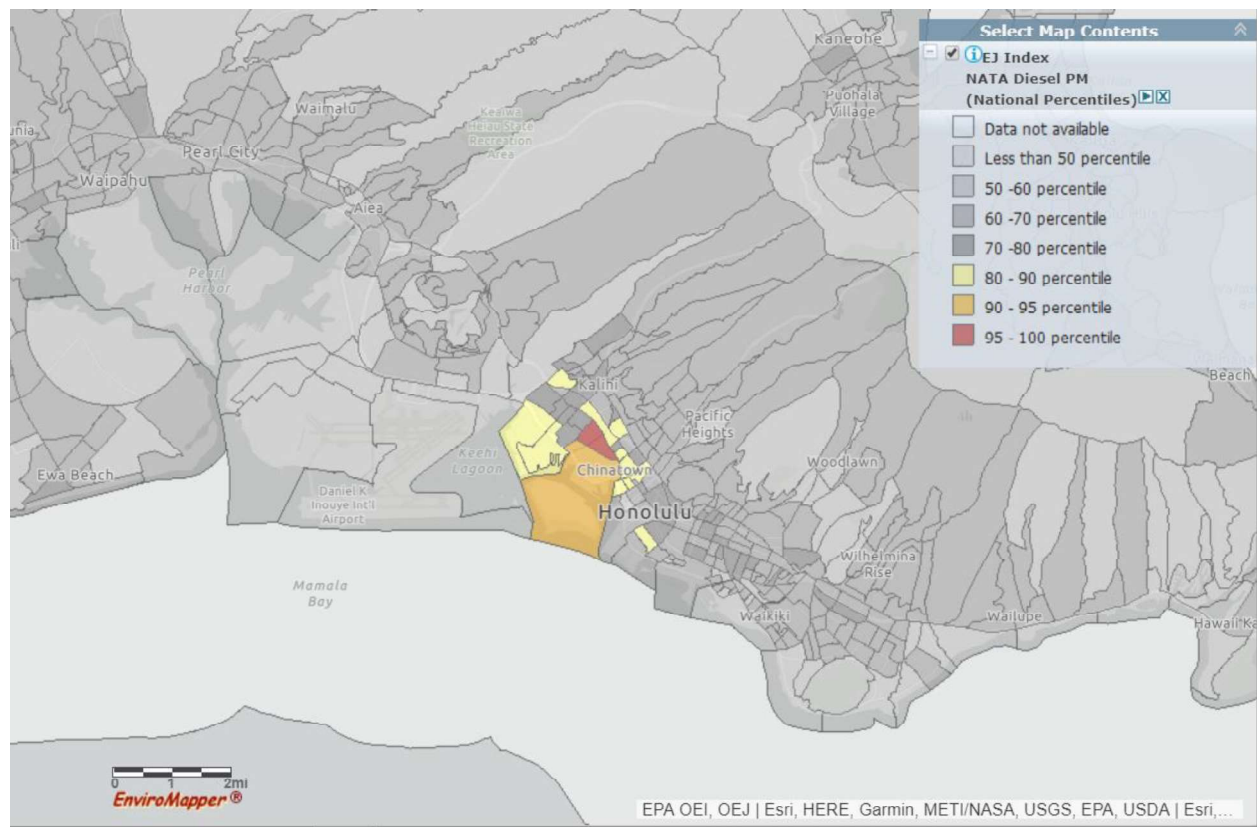
Pgm Yr	Eqipt ID	Model year	Mfr ID	Model ID	Eligible Equipment Description	Replacement Equipment Description
DERA FY19	BUS032	2002	OPUS	LFB29	Battery-electric Bus and charging equipment	Battery-electric Bus
DERA FY19	BUS036	2002	OPUS	LFB29	Battery-electric Bus and charging equipment	Battery-electric Bus
DERA FY20	BUS036	2002	OPUS	LFB29	Battery-electric Bus and charging equipment	Battery-electric Bus
DERA FY20	BUS036	2002	OPUS	LFB29	Battery-electric Bus and charging equipment	Battery-electric Bus
DERA FY20	BUS036	2002	OPUS	LFB29	Battery-electric Bus and charging equipment	Battery-electric Bus

*\*Table 1.2 is illustrative of the type of vehicle that will be replaced with the EVA Program. Vehicle replacement specifications will be updated once eligible fleet owners have been awarded.*

The Diesel Emission Quantifier (DEQ) was used to quantify all initial annual and lifetime particulate matter (PM), nitrous oxides (NO<sub>x</sub>), hydrocarbons (HC), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) emission reductions. The initial results and summary from the DEQ are shown in Table 3 of the Outcomes section.

Hawaii is a state with attainment status and the air quality is generally good. However, due to the presence of volcanic emissions from the Kilauea eruption on the Big Island, multiple exceedances of the National Air Quality Standards for sulfur dioxide are recorded annually at the Kilauea summit on the Big Island of Hawaii.

NATA Diesel PM EJ Index (74<sup>th</sup> percentile in U.S.) mapped on Oahu - U.S. EPA's Environmental Justice Screening and Mapping Tool (Version 2018) - <https://www.epa.gov/ejscreen>



## STATE/TERRITORY GOALS AND PRIORITIES:

### 1. Public health benefits

Asthma prevalence has climbed steadily since 1980 and is now the most common chronic childhood disease in the United States and Hawaii. According to 2016 Behavioral Risk Factor Surveillance System data, the lifetime and current asthma prevalence for adults and children in Hawaii is higher than the national average. It is expected that reductions in diesel particulate matter associated with the proposed projects will contribute to improvements.

### 2. Cost-effectiveness.

The emission reductions associated with each type of diesel emission reduction technology are presented in Table 3 but are gross estimates only based on fleet averages. The actual emissions benefit summary output from the DEQ will be calculated using the data from the actual vehicles replaced. The overall emission reductions and cost effectiveness will be calculated as well.

### 3. Affected Areas

Both proposed projects take place on the island of Oahu. The City and County of Honolulu, which comprises the entire island of Oahu, is Hawaii's largest metropolitan area, with an estimated population of 980,080.

Unique in the 50 states, vog (volcanic smog) emitted from the active Kilauea volcano, also impacts air quality throughout Hawaii. This mixture of sulfur dioxide and aerosols, formed when volcanic gas reacts with moisture and oxygen, is readily retained by the lungs and is potentially more harmful than either gases or particles alone.

On certain days when the typical trade winds do not blow, vog may migrate north from Kilauea and cause a significant impact on air quality in Honolulu County.

### 4. Air pollution from diesel fleets.

The target fleet is heavy duty vehicles owned by a local government agency which are operated in and around residential areas. They may idle in order to perform their function, examples would be repair vehicles for water supply or sewers as well as refuse vehicles. This exposes residents, neighborhood school age children walking to school on a collection day or both groups driving past such collections. The bus is used to shuttle passengers short distances on a frequent schedule.

## VEHICLES AND TECHNOLOGIES:

Technology is vehicle replacements. The vehicles in Table 1.1 will be diesel replacements while those in Table 1.2 will be zero-emissions/electric replacements. Only EPA/California Air Resources Board (CARB) certified engines may be used.

## ROLES AND RESPONSIBILITIES:

The Project Team that will be administering and reporting all DERA activities includes both the DOH and the Project Team member/subgrantee as described below.

The DOH will retain all reporting responsibilities required by the original grant and EPA. DOH will also provide assistance and guidance as needed to the other Project Team members so they may accomplish their tasks in a timely manner.

The Project Team member/subgrantee will be responsible for procuring the replacements for their own vehicles and shall seek bids for one or more vendors as appropriate for the following tasks:

1. Prior to commencement of the project, submit a projected work plan and timeline listing all and any activities in chronological order to be undertaken for the purpose of procuring and replacing older (model years 1995-2006 and model years 1996+ for zero emission replacements) diesel-fueled vehicles operated by the subgrantee. The replacement of vehicles must be done with newer, cleaner diesel, electric, hybrid or alternative fuel EPA certified or CARB-certified diesel engines.
2. The DOH will fund up to 25% of the cost of a replacement vehicle powered by a 2017 model year or newer engine certified to EPA emission standards. The DOH will fund up to 45% of the cost of a battery-electric replacement vehicle, unless EPA approves a waiver that would allow DOH to fund up to 75% for this category. The subgrantees, BWS and HDOT, will execute the 1<sup>st</sup> option. The HDOH will be a member of HSEO's evaluation committee for the EVA Program to select eligible fleet owners for battery-electric bus replacements in FY19 and medium-/heavy-duty electric vehicle replacements in FY20.

The subgrantees will also designate one point of contact with knowledge of the DERA-related activities as they

associate to project. The point of contact will respond to queries and provide non-sensitive information to other organizations undertaking diesel retrofit and vehicle replacement projects from the beginning of the project and one year after its conclusion. The point of contact will present information to interested groups and the media on the retrofit and replacement projects during the same period. Upon delivery and acceptance of the replacement vehicles, subgrantee(s) shall maintain records for a minimum of 3 years, for each vehicle the vehicles miles travelled monthly, fuel consumption, and any other records agreed upon by the department relating to air emissions or required by EPA for the DERA grant. These records will be summarized and submitted annually to the DOH.

**TIMELINE AND MILESTONES:**

<b>Table 2: Project Timeline and Milestones</b>		
<b>Date</b>	<b>Milestone Description</b>	<b>Quarter(s)/ Due Date for Quarterly Report</b>
October 1, 2019	Candidate Vehicles reviewed and approved by EPA.	1st Quarter/ January 31, 2020
April 1, 2020		2nd Quarter/ April 30,2020
July 1, 2020	HSEO sign MOU with DOH.	3rd Quarter, July 31,2020
August 1, 2020	EVA Program open to applicants.	
October 1, 2020	BWS and HDOT sign subgrant agreements with DOH. Evaluate and award EVA Program beneficiaries.	4th Quarter; October 31, 2020
January 1, 2021		1st Quarter, January 31, 2021
April 1, 2021		2th Quarter; April 30, 2021
July 1, 2021		3rd Quarter; July 31, 2021
October 1, 2021	BWS receive vehicle.	4th Quarter; October 31, 2021
January 1, 2022	BWS complete procurement and scrappage requirements. DOH finalize payment. HDOT receive vehicle.	1st Quarter, January 31, 2022
April 1, 2022	HDOT complete procurement and scrappage requirement. DOH finalize payment. HSEO participant fleets receive vehicles	2th Quarter; April 30, 2022
July 1, 2022	HSEO participant fleets complete procurement and scrappage requirements. DOH final payment.	3rd Quarter; July 31, 2022
October 1, 2022	Drawdown request submitted. Drawdown completed. Final report submitted.	Final Report, October 31, 2022

**DERA PROGRAMMATIC PRIORITIES:**

**EPA’S STRATEGIC PLAN LINKAGE AND ANTICIPATED OUTCOMES/OUTPUTS:**

This project supports Goal 1, Objective 1.1, ‘Improve Air Quality,’ of the EPA’s 2018 – 2022 Strategic Plan because it is attempting to reduce emissions for diesel fleets operating on the most populous island in the state of Hawaii, Oahu. Specifically, it is targeting trucks and buses operating in and around residential, rural and smaller areas. Specifically, these fleets idle near and around homes and schools as they do their daily tasks. For this fleet, The Hawaii Replacement 2019-2020 project will improve air quality and protect public health in Hawaii by reducing emissions from existing diesel vehicles which do not have Model Year 2007 controls.

The expected outputs of the program have been quantified by the expected number of retrofits and estimated emissions reductions. The targeted number of vehicles that could be replaced is one (1) diesel truck, one (1) non-road diesel vehicle, two (2) buses, and three (3) medium- or heavy-duty vehicles.

The second quantifiable output is the estimated emissions reductions due to exhaust retrofits. The EPA Diesel Emissions Quantifier (DEQ) was used to estimate the reduction of criteria pollutants. In order to use the DEQ, assumptions had to be made about the number of vehicles replaced, the average model year, the average vehicle miles traveled (VMT), the average idle time and average annual diesel gallons consumed. The outputs are summarized in table 3. Once the replacements are completed, the actual VMT will be inputted into the DEQ to estimate pollutant reductions and other related estimates.



<b>Table 3: Outcomes</b>			
<b>Activities</b>	<b>Inputs</b>	<b>Outputs</b>	<b>Outcomes (Emissions Reductions in Tons)</b>
Replace one truck (BWS)	EPA funds = \$35,000. Sub-grantee Cost Share = \$170,000.	1 MY2001 Class 7 Truck replaced w/ MY2019 Truck.	Annual NOx = 0.009 . Lifetime = 0.064 Annual PM 2.5 = 0.000 . Lifetime = 0.000 Annual HC = 0.001 . Lifetime = 0.014 Annual CO = 0.002 . Lifetime = 0.014 Annual CO2 s = 3.4 . Lifetime = 23.9
Replace one zip mobile / road zipper (HDOT)	EPA funds = \$281,494 Sub-grantee Cost Share = \$1,718,506	1 MY1998, Tier 1 Road Zipper replaced w/ MY2019, Tier 4	Annual NOx = 2.653. Lifetime = 2.653 Annual PM2.5 = 0.333. Lifetime = 0.333 Annual HC = 0.105. Lifetime = 0.105 Annual CO = 1.279. Lifetime = 1.279 Annual CO2 = 93.4. Lifetime = 93.4
Replace two diesel buses (HSEO EVA Program beneficiaries)	EPA match incentive funds = \$158,247 State Voluntary Matching Funds = \$316,494 Participating Fleet Cost-Share = \$622,733	Two (2) diesel bus replacements with two (2) zero emission battery-electric buses and charger installation	Annual NOx s = 1.459. Lifetime = 8.756 Annual PM2.5 = 0.051. Lifetime = 0.308 Annual HC = 0.132. Lifetime = 0.794 Annual CO = 0.514. Lifetime = 3.087 Annual CO2 =206.9. Lifetime = 1,241.5
Replace three diesel vehicles * (HSEO EVA Program beneficiaries)	EPA Base allocation = \$329,728 EPA match incentive funds = \$164,864 State Voluntary Matching Funds = \$329,728 Participating Fleet Cost-Share = \$1,007,503	Three (3) diesel vehicle replacements with three (3) zero emission battery-electric vehicles and charger installation	Annual NOx s = 20.418. Lifetime = 20.418 Annual PM2.5 = 0.338. Lifetime = 0.338 Annual HC = 1.245. Lifetime = 1.245 Annual CO = 7.917. Lifetime = 7.917 Annual CO2 = 2,395.9. Lifetime = 2,395.9
Share & distribute project information via outreach, websites, and publications. Overall project management.	No funds allocated	Information posted on 2 websites	Increased public awareness of the project and results. Possible adoption of diesel emission reduction technologies by public/private diesel fleets in Hawaii.

\* DEQ estimates are illustrative in nature as program awardees have not been selected at this time.

**SUSTAINABILITY OF THE PROGRAM:**

Hawaii has no mandated vehicle retrofitting or any pending legislation for other diesel reduction technology for the target fleet. Therefore, the replacements would not have occurred during the project period had DERA involvement not been provided. Sustainability of the program will depend on acquiring additional funding, examining and then expanding the interest in the community and finding project partners

\*\*\*\*

**BUDGET NARRATIVE**

**Itemized Project Budget**

<b>Table 4.1: FY19 Breakdown</b>						
<b>Budget Category</b>	<b>EPA Allocation</b>	<b>Voluntary Cost-Share</b>	<b>Mandatory Cost-Share</b>	<b>Voluntary Match (if applicable)</b>		<b>Line Total</b>
				<b>VW Mitigation Trust Funds</b>	<b>EPA Match Incentive Funds</b>	
1. Personnel				\$29,656		\$29,656
2. Fringe Benefits				\$17,818		\$17,818
3. Travel						
4. Equipment						
5. Supplies						
6. Contractual						
7. Other						
BWS subaward to replace one vehicle	\$35,000		\$170,000			\$205,000
HDOT subaward to replace one Zip Mobile	\$281,494		\$1,718,506			\$2,000,000
HSEO FY19 replace two buses		\$282,230	\$340,503	\$269,020	\$158,247	\$1,050,000
Total Other	\$316,494	\$282,230	\$2,229,009	\$269,020	\$158,247	\$3,255,000
<b>8. Total Direct Charges (sum 1-7)</b>						
9. Indirect Charges						
<b>10. Total (Indirect + Direct)</b>	\$316,494	\$282,230	\$2,229,009	\$316,494	\$158,247	\$3,302,474

\*Do not include Other Leveraged Funds on SF-424 or SF-424A

## **Explanation of Budget Framework for FY19**

- **Personnel** – Personnel costs include one HSEO Energy Analyst at a salary equivalent to SR-22 with 50% of their time assigned to the project. The annual salary range for the SR-22 position after July 1, 2018, it is \$52,956 to \$78,420. This position is funded from a portion of the State Voluntary Match, as shown in the Itemized Project Budget table, and not from federal funds..
- **Fringe Benefits** – The Hawaii Department of Budget and Finance Memo 18-12 (July 19, 2018) set the FY18 FY19 Revised Interim Fringe Benefit rate at 60.08%. The interim rate is based on the FY18 composite fringe benefit rate that is approved by the U.S. Department of Health and Human Services.
- **Travel** - N/A.
- **Supplies** - N/A
- **Equipment** - N/A
- **Contractual** - N/A
- **Other** – For FY19, the HDOH will grant a subaward to the BWS to replace one diesel combination dump truck with a crane. The replacement will use an estimated \$35,000 in DERA federal and state funding assistance. The BWS will provide approximately \$170,000, an 83% cost-share, of the projected \$205,000 total cost.

In addition, the HDOH will grant a subaward to the HDOT to replace a non-road diesel road zipper vehicle, known as the “Zip Mobile.” The replacement is estimated to use \$281,494 in DERA federal and state funding assistance. The HDOT will provide an estimated 86% cost-share, or \$1,718,506, to cover the projected total cost of \$2,000,000.

Finally, in FY19, the HDOH will be a member of HSEO’s evaluation committee for the EVA Program to select and offer rebates to private and public fleet owners looking to replace up to two older, diesel buses with battery-electric buses and purchase charging equipment needed to power the vehicles. The program is projected to use \$474,741 of FY19 DERA federal and state funding assistance. This FY19 HSEO project will be combined with the FY20 project to allow greater flexibility in the choices of replacement vehicles and allocation of funds. As a result, the cumulative funding totals will change.

- **Mandatory Cost-Share for vehicle equipment costs:**

The following descriptions of FY19 cost shares include the voluntary cost share shown in Table 4.1 above.

- In FY19, the BWS will provide approximately \$170,000, an 83% cost-share, of the projected \$205,000 total cost.
- In FY19, the HDOT will provide an 86% cost-share, or \$1,718,506 to cover the projected total cost of \$2,000,000.
- The FY19 and FY20 HSEO projects will be combined. The consolidated funding estimates a **56%** cost-share by participating fleet owners, or **\$1,630,236**, of the projected total cost of **\$2,929,297** of the vehicles and charging equipment. The individual vehicle cost shares for this project may change if EPA grants the waiver request to increase the funding limit from 45% to 75%.

- **Indirect Charges - N/A**

<b>Table 4.2: FY20 Breakdown</b>						
<b>Budget Category</b>	<b>EPA Allocation</b>	<b>Voluntary Cost-Share</b>	<b>Mandatory Cost-Share</b>	<b>Voluntary Match (if applicable)</b>		<b>Line Total</b>
				<b>VW Mitigation Trust Funds</b>	<b>EPA Match Incentive Funds</b>	
1. Personnel				\$30,329		\$30,329
2. Fringe Benefits				\$19,131		\$19,131
3. Travel						
4. Equipment						
5. Supplies						
6. Contractual						
7. Other						
HSEO FY20 replace three medium-/heavy-duty vehicles	\$329,728	\$27,203	\$980,300	\$280,268	\$164,864	\$1,782,363
Other Total	\$329,728	\$27,203	\$980,300	\$280,268	\$164,864	\$1,782,363
<b>8. Total Direct Charges (sum 1-7)</b>						
9. Indirect Charges						
<b>10. Total (Indirect + Direct)</b>	\$329,728	\$27,203	\$980,300	\$329,728	\$164,864	\$1,831,823

\*Do not include Other Leveraged Funds on SF-424 or SF-424A

### **Explanation of Budget Framework**

- **Personnel** - Personnel costs include one HSEO Energy Analyst at a salary equivalent to SR-22 with 50% of their time assigned to the project. The annual salary range for the SR-22 position after July 1, 2018, it is \$52,956 to \$78,420. This position is funded from a portion of the State Voluntary Match, as shown in the Itemized Project Budget table, and not from federal funds.
- **Fringe Benefits** - The Hawaii Department of Budget and Finance Memo 19-07 (June 17, 2019) set the FY20 Revised Interim Fringe Benefit rate at 63.08%. The interim rate is based on the FY18 composite fringe benefit rate that is approved by the U.S. Department of Health and Human Services.
- **Travel** - N/A.
- **Supplies** - N/A
- **Equipment** - N/A
- **Contractual** - N/A

- **Other** - The FY20 HSEO project is for the continued development and administration of the EVA Program to offer rebates to private and public fleet owners looking to replace older, medium- /heavy-duty vehicles with battery-electric vehicles. The program is projected to use \$824,320 of DERA federal and state funding assistance to replace three (3) medium- or heavy-duty vehicles with an equivalent number of battery-electric medium- or heavy-duty vehicles and support the purchase of charging equipment needed to power the vehicles. The FY20 project will combine the with FY19 project described above in order to allow greater flexibility in the choices of replacement vehicles and allocation of funds.
  - **Mandatory Cost-Share for vehicle equipment costs:**

The following descriptions of cost shares include the voluntary cost share shown in Table 4.2 above.

- The FY19 and FY20 HSEO projects will be combined. The consolidated funding estimates a **56%** cost-share by participating fleet owners, or **\$1,630,236**, of the projected total cost of **\$2,929,297** of the vehicles and charging equipment. The individual vehicle cost shares for this project may change if EPA grants the waiver request to increase the funding limit from 45% to 75%.

- **Indirect Charges - N/A**
-

### **Administrative Costs Expense Cap**

Administrative costs are capped at 15% of the HSEO EVA Program project. In FY19, HSEO will utilize \$47,474 of voluntary matching funds from the state's VW Trust Funds and \$49,460 in FY20.

### **Matching Funds and Cost-Share Funds**

- In FY19, the BWS will pay their cost share using City & County funds which are non-federal funds.
- In FY19, the HDOT will pay their cost share using State funds which are non-federal funds.
- In FY19 and FY20, the HSEO will contribute VW Trust Funds, which are non-federal funds, as the Voluntary Matching Funds in order to receive the additional 50% incentive. The cost shares for each project will come from the selected participants and will not include federal funds.

### **Funding Partnerships**

In FY19, the HDOH will grant two subawards: BWS and HDOT. Subgrant agreements have been executed with both organizations. The two agencies will adhere to all applicable requirements.

For FY19 and FY20, the HDOH has signed a Memorandum of Agreement with HSEO. HSEO is responsible for the development and administration of the EVA rebate program and HDOH is responsible for the payment of participant support costs to DERA program beneficiaries for the successful procurement of eligible vehicles through the EVA Program. HDOH will be a member of HSEO's evaluation committee for the EVA Program to select and offer rebates to program beneficiaries for battery-electric bus replacements in FY19 and medium-/heavy-duty electric vehicle replacements in FY20. HSEO will have a written agreement with selected program beneficiaries and reimbursement of participant support costs will be made by HDOH once all deliverables of the written agreement have been met.