RSH 10 RUMFORD
(1) 2000
(2) 2002
(2) 2003
(3) 2004
(2) 2005

DIESEL → PROPANE

9/27/18
dcg
LC

Section 7: Application Scoring Matrix

Score Assigned	Attachment	Attachment Description
10	A	**Mitigation Action Description:** Related to Maine's Beneficiary Mitigation Plan
20 avg = 91%	B	**NOx Emission Reduction:** NOx emission reductions estimate using EPA's Diesel Emission Quantifier
10	C	**Health Benefits:** Maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
10 +MILLS	D	**Action Location:** Within an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.
0	E	**Class 1 Areas:** Benefits a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area.
10 950,000 − 190,000 = $570,000 REQ	F	**Verified Funding:** Match or leveraged funding for cost sharing secured. Budget provided.
10	G	**Action Schedule:** Action implemented within two years of the award date. Schedule provided.
10	H	**Benefit Period:** Sustained emission benefits over the ten-year Trust Effective Period. Maintenance plan provided.
10	I	**Relevant Experience and Compliance Certification:** Existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

Gates, Judy

From: Scott Holmes <sholmes@rsu10.org>
Sent: Friday, September 14, 2018 12:09 PM
To: Gates, Judy
Subject: RSU #10 Maine Volkswagen Environmental Mitigation Action Application
Attachments: RSU 10 VW ENV Grant Application.pdf

Hopefully this is the correct address to submit this to.

Please let me know if I am incorrect.

I am also sending a hard copy as requested in the mail.

Scott Holmes, Director
Buildings, Grounds & Transportation
799 Hancock St., Suite 1
Rumford Me 04276
207-418-7062

"There are only two choices... Make excuses or make progress"

MaineDOT

(For MaineDOT Use Only)
Date Application Received
9/14/18
Beneficiary's Project ID
23901.10
Funding Request #
19

Maine Volkswagen Environmental Mitigation Action
Round 1 Application for Appendix D-2 Eligible Actions

- All applications for Round 1 funding are **due by September 15, 2018.**
- A fillable **application template** is available at www.maine.gov//mdot/vw/application
- Use the **list of attachments** in Section 3 to ensure that your application is complete.
- **Funding** approvals for action(s) may be whole or partial.
- A **timeline** for Maine's Round 1 application process can be found at www.maine.gov/mdot/vw/application.
- For information on Maine's Diesel Emission Reduction Act (DERA) Program, go to http://www.maine.gov/dep/air/mobile/cleandiesel.htmls.
- For information on Zero Emission Vehicle Supply Equipment (ZEVSE), go to www.efficiencymaine.com.
- Submit any **questions** through the website at www.maine.gov/mdot/vw/application/faqs.
- Information on the **current base price** for Maine school buses can be found at http://www.maine.gov/doe/transportation/programs/buspurchase.html

Section 1: General Information

Action Title: RSU #10 Environmental Mitigation Action Plan			
Action Location: Town/Territory: Rumford		County: Oxford	
Type of Action: Repower: ☐ Replacement: XX			
Action Proponent: RSU # 10			
Action Proponent Mailing Address: 799 Hancock Street, Suite #1			
City: Rumford	State: ME	Zip: 04276	County: Oxford
Daytime Phone: 207-369-5560	Alternate Phone: 207-418-7062	Email: sholmes@rsu10.org	
Authorized Agent (if different from Action Proponent):			
Authorized Agent Mailing Address:			
City:	State:	Zip:	County:
Daytime Phone:	Alternate Phone:	Email:	

Section 2: Eligibility Criteria

The following categories are **eligible mitigation actions** pursuant to Appendix D-2 of the Environmental Mitigation Trust Agreement (https://www.maine.gov/mdot/vw/app/Maine_VW_Eligible_Mitigation_Actions_1-8.pdf) and reflect basic eligibility criteria for consideration under this program. See Maine's Beneficiary Mitigation Plan (www.maine.gov/mdot/vw/BMP_final_2-12-18.pdf) for details on eligibility. Check all that apply. Leave checkboxes blank for actions that don't apply. List individual vehicles or equipment using the table on the following page.

Check all that apply	Eligible Mitigation Actions
☐	**1992-2009 engine model year Class 8 Local Freight Trucks and Port Drayage Trucks** repowered with any new diesel or alternate fueled engine or all-electric engine, or replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the eligible large trucks mitigation action occurs or one engine model year prior.
X	**2009 engine model year or older Class 4-8 school buses, shuttle buses, or transit buses** repowered with any new diesel or alternate fueled or all-electric engine, or replaced with any new diesel or all-electric vehicle, with the engine model year in which the eligible bus mitigation action occurs or one engine model year prior.
☐	**Pre-Tier 4 freight switcher locomotives that operate 1000 or more hours per year** repowered with any new diesel or alternate fueled or all-electric freight switcher certified to meet the applicable EPA emissions standards or other more stringent equivalent state standard.
☐	**Unregulated, Tier 1 or Tier 2 marine engines on ferries or tugs** repowered with Tier 3, Tier 4, alternate fueled, or all-electric engine, or upgraded with an EPA certified remanufacture system or an EPA verified engine upgrade.
☐	**Marine shore power systems or components of such systems** that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Components eligible for reimbursement are limited to: cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution. Subject marine shore power systems comply with international shore power design standards (ISO/IEC/IEEE 80005-1-2012 high voltage shore connection systems or the IEC/PAS 80005-3:2014 low voltage shore connection systems) and are supplied with power sourced from the local utility grid.
☐	**1992-2009 engine model year Class 4-7 local freight trucks** repowered with a new diesel, alternate fueled, or all-electric engine, or replaced with any new diesel, alternate fueled, or all-electric vehicle, with the engine model year in which the eligible medium trucks mitigation action occurs or one engine model year prior.
☐	**Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment**; and **uncertified or certified to 3 g/bhp-hr or higher emissions spark ignition engine powered airport ground support equipment** repowered with an all-electric engine, or replaced with the same airport ground support equipment in an all-electric form.
☐	**Forklifts with greater than 8000 pounds of lift capacity and port cargo handling equipment** repowered with an all-electric engine, or replaced with the same equipment in an all-electric form.

Vehicles & equipment proposed for replacement or repower under this Eligible Mitigation Action.
(Leave fields blank that do not apply)

	Current Vehicle Class	Current Tier (if applicable)	Current Model	Current Model Year	Mileage	Current Fuel Type	Proposed Fuel Type	Associated equipment	
1	4-8		Thomas	2000	126,786	Diesel	Propane	90168	92.2% 9.21
2	4-8		Thomas	2002	114,465	Diesel	Propane	44	92.2% 059.32
3	4-8		Thomas	2002	127,116	Diesel	Propane	407	92.2% 12.41
4	4-8		Thomas	2003	106,476	Diesel	Propane	412	89.6% 13.89
5	4-8		Thomas	2003	110,993	Diesel	Propane	401	89.6 9.80
6	4-8		Thomas	2004	110,327	Diesel	Propane	281	89.6 444.48
7	4-8		Thomas	2004	122,775	Diesel	Propane	255	89.6% 13.29
8	4-8		Thomas	2004	121,964	Diesel	Propane	296	89.6 963.89
9	4-8		Thomas	2005	134,943	Diesel	Propane	174	89.6% 98.34
10	4-8		Thomas	2005	159,981	Diesel	Propane	149	89.6% 364.87

Section 3: Action Overview and Instructions

The following information provides the reviewers with background on the proposed action and will be considered as part of final decisions on what actions are funded in any given year. If an attachment is not applicable to the proposed action, that action is not disqualified from funding; however, Action Proponents are encouraged to provide accurate and concise answers to as many questions as possible and note why an attachment is not relevant to their proposal.

Check if attached	Scoring (for MaineDOT use)	Attachment	Attachment Description
X		A	**Mitigation Action Description:** Attach a no more than two-page narrative describing the action and how it relates to Maine's Beneficiary Mitigation Plan and label as "Attachment A".
X		B	**NOx Emission Reduction:** Estimate the NOx emission reductions from the action in terms of dollar per ton of NOx using EPA's Diesel Emission Quantifier found at https://cfpub.epa.gov/quantifier/index.cfm?action=main.home or for heavy-duty vehicles: http://afleet-web.es.anl.gov/hdv-emissions-calculator/ Attach a separate summary calculation worksheet generated by the Quantifier for each vehicle or piece of equipment and label as "Attachment B".
X		C	**Health Benefits:** Describe any health benefits maximized by the action beyond calculated NOx emission reductions as "Attachment C". Examples of maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
X		D	**Action Location:** As "Attachment D", indicate whether the action will occur in an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.
X		E	**Class 1 Areas:** Using the maps found at https://www.maine.gov/dep/air/meteorology/class1.note the location of the proposed action to indicate whether it will benefit a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area. Include the map as "Attachment E".
X		F	**Verified Funding:** As "At tachment F", verify that the action has secured funding for cost sharing or leveraging by providing a commitment letter or signed agreement from a financial institution or budget committee for cost share or leveraged funding. Also, using the template in Section 4 of this application, include a general project budget indicating the amount of match to be provided by the Action Proponent.
X		G	**Action Schedule:** The action must be implemented within two years of the award date. Using the template provided in Section 4 of this application, provide schedule and major milestones, labeled as "Attachment G".
X		H	**Benefit Period:** The action must result in sustained emission benefits over the ten-year Trust Effective Period. Provide a concise description of how benefits will persist through 2027 and a maintenance plan for eligible vehicles/equipment funded under this program as "Attachment H".
X		I	**Relevant Experience and Compliance Certification:** By signing provisions in "Attachment I", the Action Proponent and Authorized Agent (if applicable) verify that there is existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

Western Foothill Regional District - RSU #10

Maine Volkswagen Environmental Mitigation Action

Round #1

Attachment A: Mitigation Action Description

RSU #10 is requesting funds for the submitted action of replacing 10 Class 4-8 diesel powered school buses with propane powered school buses. 60% of RSU 10's School bus fleet is 2009 and or older and powered older diesel legacy engines. RSU #10 will then scrap the buses that will be replaced.

RSU #10 is committed to and equipment in terms of annual tons of reductions by near-zero emission vehicles and engines. Steps have been taken to replace the Oil burning boilers in one school and are working toward a new building being built to replace two to three older buildings will have clean burning fuels.

RSU #10's Transportation department is working towards achieving significant and sustained cost effective reductions in NOx emissions, engines by replacing it's aging bus fleet with near-zero emission vehicles and engines such as propane. Our present hurdle is infrastructure costs for a propane filling stations compared to the amount of buses we can purchase annually. Our present bus purchasing plan has us purchasing one new bus for the Mountain Valley Region a year. A single propane bus purchase will not offset the costs of the filling station and more importantly not reduce the NOx emissions as rapidly as multiple propane buses would.

The majority of RSU #10's school (5) are located in the town of Rumford or Mexico Maine. Also located in this area is the paper mill 9 Dragons (formally Catalyst Paper). 4 of the 5 schools are all within a mile radius of the paper mill. You can see the mill and or its emissions from each school.

9 Dragons Rumford mill has a total licensed annual emissions for their facility with the Department of Environmental Protection. Their paper making equipment IE: Power boilers, 2 Cogen boilers, lime kiln, Recovery boiler, Smelt tank, R10 air floatation boiler, ™-1 dryers, cogen heaters, multiple generators, and multiple building heaters and other building equipment. Is licensed to emit 5089.8 tons of NOx emissions annually. This is just the papermaking process and does not include the diesel powered vehicles such as loaders, pulp trucks, log trucks, and other yard vehicles powered by diesel engines.

RSU #10's bus garage is ;located at Mountain Valley High School. The majority of buses are kept at this location. There are however at minimum 3 buses parked at each school. These buses are here to save time and travel costs for our bus drivers/custodians. This also provides

for shelter and expedited evacuation of the area in emergency situations. Due to the cold winter months the diesel buses need to be plugged into a block heater to allow them to start. The electrical outlets are located next to the school buildings and playgrounds. Because of this students are not only exposed to the diesel emissions while on the bus they are also exposed during startup, pre-trip inspections, and moving to and from the parking/school area.

Combined with the mill's NOx output and the aging bus fleet our school district would certainly see beneficial impact with this mitigation projects on air quality as our area bears a disproportionate share of the State's air pollution burden.

Scott Holme 09/13/201 Summary Report from the Diesel Emissions Quantifier

RSU 10

Scott Holmes

sholmes@rsu10.org

Attatchment B

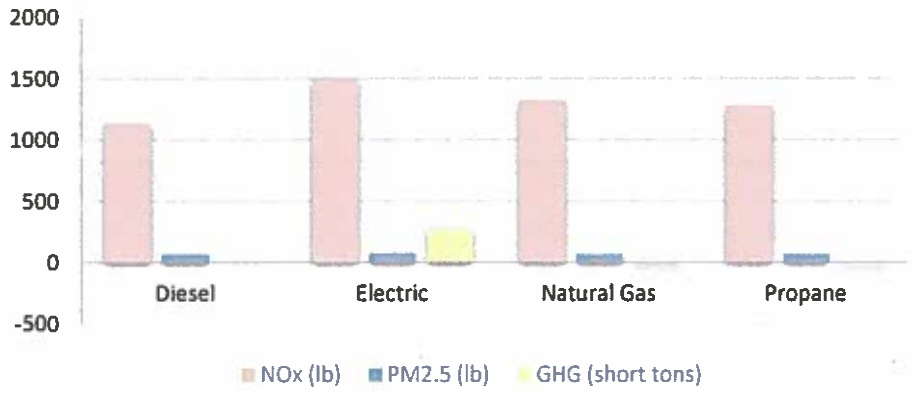
Type	Target Fleet	Class/ Equip ment	Number of Vehicles Retrofitted	Model Year	Retrofit Year	Technology Description	Fuel Type	Vehicle Miles Traveled/Year (VMT)	Percent Reduced (NOx, %)	Baseline of Vehicles Retrofitted per year (NOx, short tons/year)	Amount Reduced per Year (NOx, short tons)	Lifetime Baseline of Vehicles Retrofitted (NOx, short tons)	Lifetime Amount Reduced (NOx, short tons)	Lifetime Amount Emitted After Retrofit, Retrofitted Vehicles (NOx, short tons)	Capital Cost Effectiveness ($/short ton), Retrofitted Vehicles (NOx)
Onroad	School Bus	School Buses	1	2000	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	92.00%	0.1256	0.1155	0.1256	0.1155	0.01	774,612.38
Onroad	School Bus	School Buses	1	2002	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	92.00%	0.1256	0.1155	0.3768	0.3466	0.0301	258,204.17
Onroad	School Bus	School Buses	1	2002	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	92.00%	0.1256	0.1155	0.3768	0.3466	0.0301	258,204.17
Onroad	School Bus	School Buses	1	2003	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.1934	0.1733	0.0201	516,484.45
Onroad	School Bus	School Buses	1	2003	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.1934	0.1733	0.0201	516,484.45
Onroad	School Bus	School Buses	1	2004	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.2901	0.2599	0.0302	344,321.46
Onroad	School Bus	School Buses	1	2004	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.2901	0.2599	0.0302	344,321.46
Onroad	School Bus	School Buses	1	2004	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.2901	0.2599	0.0302	344,321.46

Onroad	School Bus	School Buses	1	2005	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.3868	0.3466	0.0402	258,241.75
Onroad	School Bus	School Buses	1	2005	2020	Vehicle Replacement - LPG/Propane	ULSD	14084	89.60%	0.0967	0.0866	0.3868	0.3466	0.0402	258,241.75

2000(1)

Environmental Mitigation with Scrappage

New Vehicle Emission Benefit



New Vehicle Emission Benefits				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	1131.27	1503.1	1317.18	1275.55
PM2.5 (lb)	71.48	76.89	71.48	71.01
GHG (short tons)	0	271.24	18.6	-18.38

New Vehicle Cost Effectiveness				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	N/A	N/A	N/A	$74
PM2.5 (lb)	N/A	N/A	N/A	$1,338
GHG (short tons)	N/A	N/A	N/A	N/A

Project Options	
State	ME
Project Type	Environmental Mitigation with Scrappage

Vehicle Options	
Type	School Bus
Number of Vehicles	1
Model Year of Scrapped Vehicle	2000
Years for Early Retirement of Scrapped Vehicle	5
Lifetime of New Vehicle (Years) After Scrappage	10
Annual Miles of Scrapped Vehicle	15000
Annual Miles of New Vehicle	15000
Use Diesel In-Use Multiplier?	No
Use Low NOx Engines?	No

Funding Options ($)	
Diesel Vehicle Funding	$0.00
Electric Vehicle Funding	$0.00
Natural Gas Vehicle Funding	$0.00
Propane Vehicle Funding	$95,000.00

Fuel Options	
Natural Gas (NG) Feedstock Source	North American NG
Source of Electricity	NPCC

Source of Electricity Percentages	
Residual Oil	0.8%
Natural Gas	48.8%
Coal	2.6%
Nuclear	29.8%
Biomass	0.6%
Renewable (e.g Wind, Solar)	17.3%

Fuel Economy	
Old Diesel (MPDGE)	7.7
New Diesel (MPDGE)	7.7
Electric (MPDGE)	19.6
Natural Gas (MPDGE)	6.5
Propane (MPDGE)	6.4

NOx Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2000	N/A	5	7.509
Diesel	2017	N/A	5	0.6672
Diesel	2017	10	N/A	0.7908
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.3336
Natural Gas	2017	10	N/A	0.3954
Propane	2017	N/A	5	0.430059259
Propane	2017	10	N/A	0.473065185

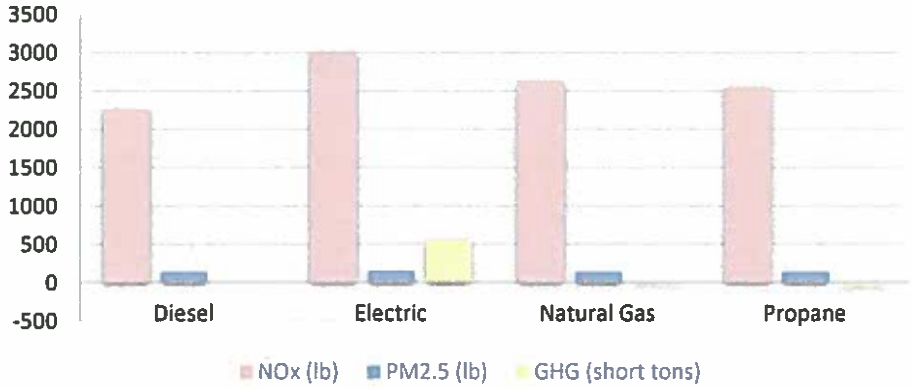
PM2.5 Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2000	N/A	5	0.442
Diesel	2017	N/A	5	0.00972
Diesel	2017	10	N/A	0.01152
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.00972
Natural Gas	2017	10	N/A	0.01152
Propane	2017	N/A	5	0.01
Propane	2017	10	N/A	0.0128

GHG Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2000	N/A	5	1673.965663
Diesel	2017	N/A	5	1673.965663
Diesel	2017	10	N/A	1673.965663
Electric	2017	N/A	5	580.3509843
Electric	2017	10	N/A	580.3509843
Natural Gas	2017	N/A	5	1598.955124
Natural Gas	2017	10	N/A	1598.955124
Propane	2017	N/A	5	1748.064074
Propane	2017	10	N/A	1748.064074

2002 (2)

Environmental Mitigation with Scrappage

New Vehicle Emission Benefit



New Vehicle Emission Benefits				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	2262.54	3006.2	2634.37	2551.1
PM2.5 (lb)	142.95	153.79	142.95	142.01
GHG (short tons)	0	542.48	37.21	-36.76

New Vehicle Cost Effectiveness				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	N/A	N/A	N/A	$37
PM2.5 (lb)	N/A	N/A	N/A	$669
GHG (short tons)	N/A	N/A	N/A	N/A

Project Options	
State	ME
Project Type	Environmental Mitigation with Scrappage

Vehicle Options	
Type	School Bus
Number of Vehicles	2
Model Year of Scrapped Vehicle	2002
Years for Early Retirement of Scrapped Vehicle	5
Lifetime of New Vehicle (Years) After Scrappage	10
Annual Miles of Scrapped Vehicle	15000
Annual Miles of New Vehicle	15000
Use Diesel In-Use Multiplier?	No
Use Low NOx Engines?	No

Funding Options ($)	
Diesel Vehicle Funding	$0.00
Electric Vehicle Funding	$0.00
Natural Gas Vehicle Funding	$0.00
Propane Vehicle Funding	$95,000.00

Fuel Options	
Natural Gas (NG) Feedstock Source	North American NG
Source of Electricity	NPCC

Source of Electricity Percentages	
Residual Oil	0.8%
Natural Gas	48.8%
Coal	2.6%
Nuclear	29.8%
Biomass	0.6%
Renewable (e.g Wind, Solar)	17.3%

Fuel Economy	
Old Diesel (MPDGE)	7.7
New Diesel (MPDGE)	7.7
Electric (MPDGE)	19.6
Natural Gas (MPDGE)	6.5
Propane (MPDGE)	6.4

NOx Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2002	N/A	5	7.509
Diesel	2017	N/A	5	0.6672
Diesel	2017	10	N/A	0.7908
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.3336
Natural Gas	2017	10	N/A	0.3954
Propane	2017	N/A	5	0.430059259
Propane	2017	10	N/A	0.473065185

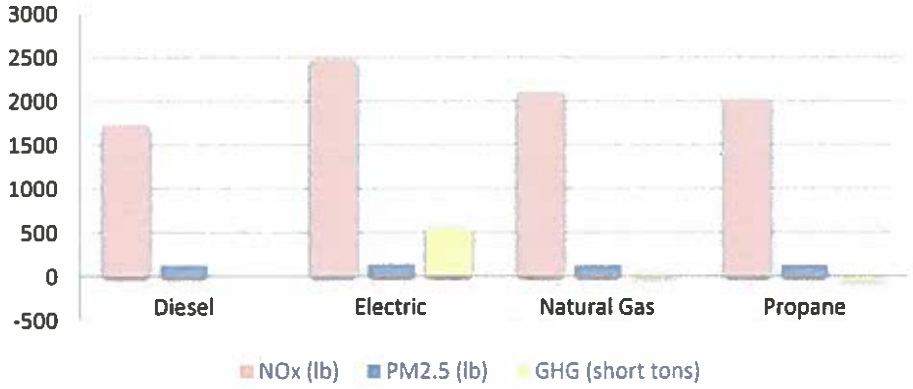
PM2.5 Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2002	N/A	5	0.442
Diesel	2017	N/A	5	0.00972
Diesel	2017	10	N/A	0.01152
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.00972
Natural Gas	2017	10	N/A	0.01152
Propane	2017	N/A	5	0.01
Propane	2017	10	N/A	0.0128

GHG Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2002	N/A	5	1673.965663
Diesel	2017	N/A	5	1673.965663
Diesel	2017	10	N/A	1673.965663
Electric	2017	N/A	5	580.3509843
Electric	2017	10	N/A	580.3509843
Natural Gas	2017	N/A	5	1598.955124
Natural Gas	2017	10	N/A	1598.955124
Propane	2017	N/A	5	1748.064074
Propane	2017	10	N/A	1748.064074

2003(2)

Environmental Mitigation with Scrappage

New Vehicle Emission Benefit



New Vehicle Emission Benefits				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	1733.43	2477.09	2105.26	2022
PM2.5 (lb)	128.73	139.57	128.73	127.79
GHG (short tons)	0	542.48	37.21	-36.76

New Vehicle Cost Effectiveness				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	N/A	N/A	N/A	$47
PM2.5 (lb)	N/A	N/A	N/A	$743
GHG (short tons)	N/A	N/A	N/A	N/A

Project Options	
State	ME
Project Type	Environmental Mitigation with Scrappage

Vehicle Options	
Type	School Bus
Number of Vehicles	2
Model Year of Scrapped Vehicle	2003
Years for Early Retirement of Scrapped Vehicle	5
Lifetime of New Vehicle (Years) After Scrappage	10
Annual Miles of Scrapped Vehicle	15000
Annual Miles of New Vehicle	15000
Use Diesel In-Use Multiplier?	No
Use Low NOx Engines?	No

Funding Options ($)	
Diesel Vehicle Funding	$0.00
Electric Vehicle Funding	$0.00
Natural Gas Vehicle Funding	$0.00
Propane Vehicle Funding	$95,000.00

Fuel Options	
Natural Gas (NG) Feedstock Source	North American NG
Source of Electricity	NPCC

Source of Electricity Percentages	
Residual Oil	0.8%
Natural Gas	48.8%
Coal	2.6%
Nuclear	29.8%
Biomass	0.6%
Renewable (e.g Wind, Solar)	17.3%

Fuel Economy	
Old Diesel (MPDGE)	7.7
New Diesel (MPDGE)	7.7
Electric (MPDGE)	19.6
Natural Gas (MPDGE)	6.5
Propane (MPDGE)	6.4

NOx Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2003	N/A	5	5.909
Diesel	2017	N/A	5	0.6672
Diesel	2017	10	N/A	0.7908
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.3336
Natural Gas	2017	10	N/A	0.3954
Propane	2017	N/A	5	0.430059259
Propane	2017	10	N/A	0.473065185

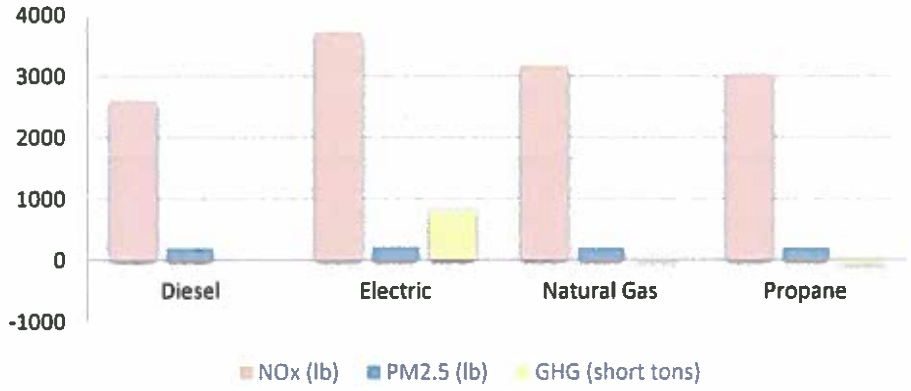
PM2.5 Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2003	N/A	5	0.399
Diesel	2017	N/A	5	0.00972
Diesel	2017	10	N/A	0.01152
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.00972
Natural Gas	2017	10	N/A	0.01152
Propane	2017	N/A	5	0.01
Propane	2017	10	N/A	0.0128

GHG Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2003	N/A	5	1673.965663
Diesel	2017	N/A	5	1673.965663
Diesel	2017	10	N/A	1673.965663
Electric	2017	N/A	5	580.3509843
Electric	2017	10	N/A	580.3509843
Natural Gas	2017	N/A	5	1598.955124
Natural Gas	2017	10	N/A	1598.955124
Propane	2017	N/A	5	1748.064074
Propane	2017	10	N/A	1748.064074

2004 (3)

Environmental Mitigation with Scrappage

New Vehicle Emission Benefit



New Vehicle Emission Benefits				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	2600.14	3715.64	3157.89	3032.99
PM2.5 (lb)	193.1	209.35	193.1	191.69
GHG (short tons)	0	813.72	55.81	-55.13

New Vehicle Cost Effectiveness				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	N/A	N/A	N/A	$31
PM2.5 (lb)	N/A	N/A	N/A	$496
GHG (short tons)	N/A	N/A	N/A	N/A

Project Options	
State	ME
Project Type	Environmental Mitigation with Scrappage

Vehicle Options	
Type	School Bus
Number of Vehicles	3
Model Year of Scrapped Vehicle	2004
Years for Early Retirement of Scrapped Vehicle	5
Lifetime of New Vehicle (Years) After Scrappage	10
Annual Miles of Scrapped Vehicle	15000
Annual Miles of New Vehicle	15000
Use Diesel In-Use Multiplier?	No
Use Low NOx Engines?	No

Funding Options ($)	
Diesel Vehicle Funding	$0.00
Electric Vehicle Funding	$0.00
Natural Gas Vehicle Funding	$0.00
Propane Vehicle Funding	$95,000.00

Fuel Options	
Natural Gas (NG) Feedstock Source	North American NG
Source of Electricity	NPCC

Source of Electricity Percentages	
Residual Oil	0.8%
Natural Gas	48.8%
Coal	2.6%
Nuclear	29.8%
Biomass	0.6%
Renewable (e.g Wind, Solar)	17.3%

Fuel Economy	
Old Diesel (MPDGE)	7.7
New Diesel (MPDGE)	7.7
Electric (MPDGE)	19.6
Natural Gas (MPDGE)	6.5
Propane (MPDGE)	6.4

NOx Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2004	N/A	5	5.909
Diesel	2017	N/A	5	0.6672
Diesel	2017	10	N/A	0.7908
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.3336
Natural Gas	2017	10	N/A	0.3954
Propane	2017	N/A	5	0.430059259
Propane	2017	10	N/A	0.473065185

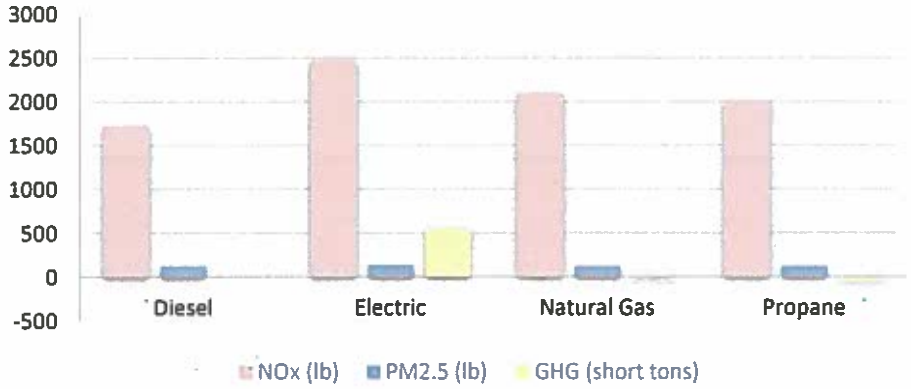
PM2.5 Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2004	N/A	5	0.399
Diesel	2017	N/A	5	0.00972
Diesel	2017	10	N/A	0.01152
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.00972
Natural Gas	2017	10	N/A	0.01152
Propane	2017	N/A	5	0.01
Propane	2017	10	N/A	0.0128

GHG Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2004	N/A	5	1673.965663
Diesel	2017	N/A	5	1673.965663
Diesel	2017	10	N/A	1673.965663
Electric	2017	N/A	5	580.3509843
Electric	2017	10	N/A	580.3509843
Natural Gas	2017	N/A	5	1598.955124
Natural Gas	2017	10	N/A	1598.955124
Propane	2017	N/A	5	1748.064074
Propane	2017	10	N/A	1748.064074

2005 (2)

Environmental Mitigation with Scrappage

New Vehicle Emission Benefit



New Vehicle Emission Benefits				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	1733.43	2477.09	2105.26	2022
PM2.5 (lb)	128.73	139.57	128.73	127.79
GHG (short tons)	0	542.48	37.21	-36.76

New Vehicle Cost Effectiveness				
Pollutant	**Diesel**	**Electric**	**Natural Gas**	**Propane**
NOx (lb)	N/A	N/A	N/A	$47
PM2.5 (lb)	N/A	N/A	N/A	$743
GHG (short tons)	N/A	N/A	N/A	N/A

Project Options	
State	ME
Project Type	Environmental Mitigation with Scrappage

Vehicle Options	
Type	School Bus
Number of Vehicles	2
Model Year of Scrapped Vehicle	2005
Years for Early Retirement of Scrapped Vehicle	5
Lifetime of New Vehicle (Years) After Scrappage	10
Annual Miles of Scrapped Vehicle	15000
Annual Miles of New Vehicle	15000
Use Diesel In-Use Multiplier?	No
Use Low NOx Engines?	No

Funding Options ($)	
Diesel Vehicle Funding	$0.00
Electric Vehicle Funding	$0.00
Natural Gas Vehicle Funding	$0.00
Propane Vehicle Funding	$95,000.00

Fuel Options	
Natural Gas (NG) Feedstock Source	North American NG
Source of Electricity	NPCC

Source of Electricity Percentages	
Residual Oil	0.8%
Natural Gas	48.8%
Coal	2.6%
Nuclear	29.8%
Biomass	0.6%
Renewable (e.g Wind, Solar)	17.3%

Fuel Economy	
Old Diesel (MPDGE)	7.7
New Diesel (MPDGE)	7.7
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Diesel	2017	N/A	5	0.6672
Diesel	2017	10	N/A	0.7908
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.3336
Natural Gas	2017	10	N/A	0.3954
Propane	2017	N/A	5	0.430059259
Propane	2017	10	N/A	0.473065185

PM2.5 Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2005	N/A	5	0.399
Diesel	2017	N/A	5	0.00972
Diesel	2017	10	N/A	0.01152
Electric	2017	N/A	5	0
Electric	2017	10	N/A	0
Natural Gas	2017	N/A	5	0.00972
Natural Gas	2017	10	N/A	0.01152
Propane	2017	N/A	5	0.01
Propane	2017	10	N/A	0.0128

GHG Emissions				
Fuel	Year	Remaining Years	Scrappage Years	Emission Rate (g/mi)
Diesel	2005	N/A	5	1673.965663
Diesel	2017	N/A	5	1673.965663
Diesel	2017	10	N/A	1673.965663
Electric	2017	N/A	5	580.3509843
Electric	2017	10	N/A	580.3509843
Natural Gas	2017	N/A	5	1598.955124
Natural Gas	2017	10	N/A	1598.955124
Propane	2017	N/A	5	1748.064074
Propane	2017	10	N/A	1748.064074

Western Foothill Regional District - RSU #10

Maine Volkswagen Environmental Mitigation Action

Round #1

Attachment D: Action Location

All 5 schools in that will benefit from this action plan are in an area with a disproportionate quantity of air pollution. These areas include but not limited to:

Nine Dragon pulp and paper mill rail yard

Nine Dragon log receiving operations.

Multiple logging truck fleets.

Multiple oil delivery fleets

Bus fleets in school yards 24 buses total. 60% 2009 and older


MVHS
Roxbury Rd
120
17
MES
MVMS
120
RES
Main St
Pulp Truck Deliveries
2
Nine Draggons
Bridge St
Community
C N Brown
Prospect Ave
Rail Yard
Power
Red boxes are schools
PLC
2

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

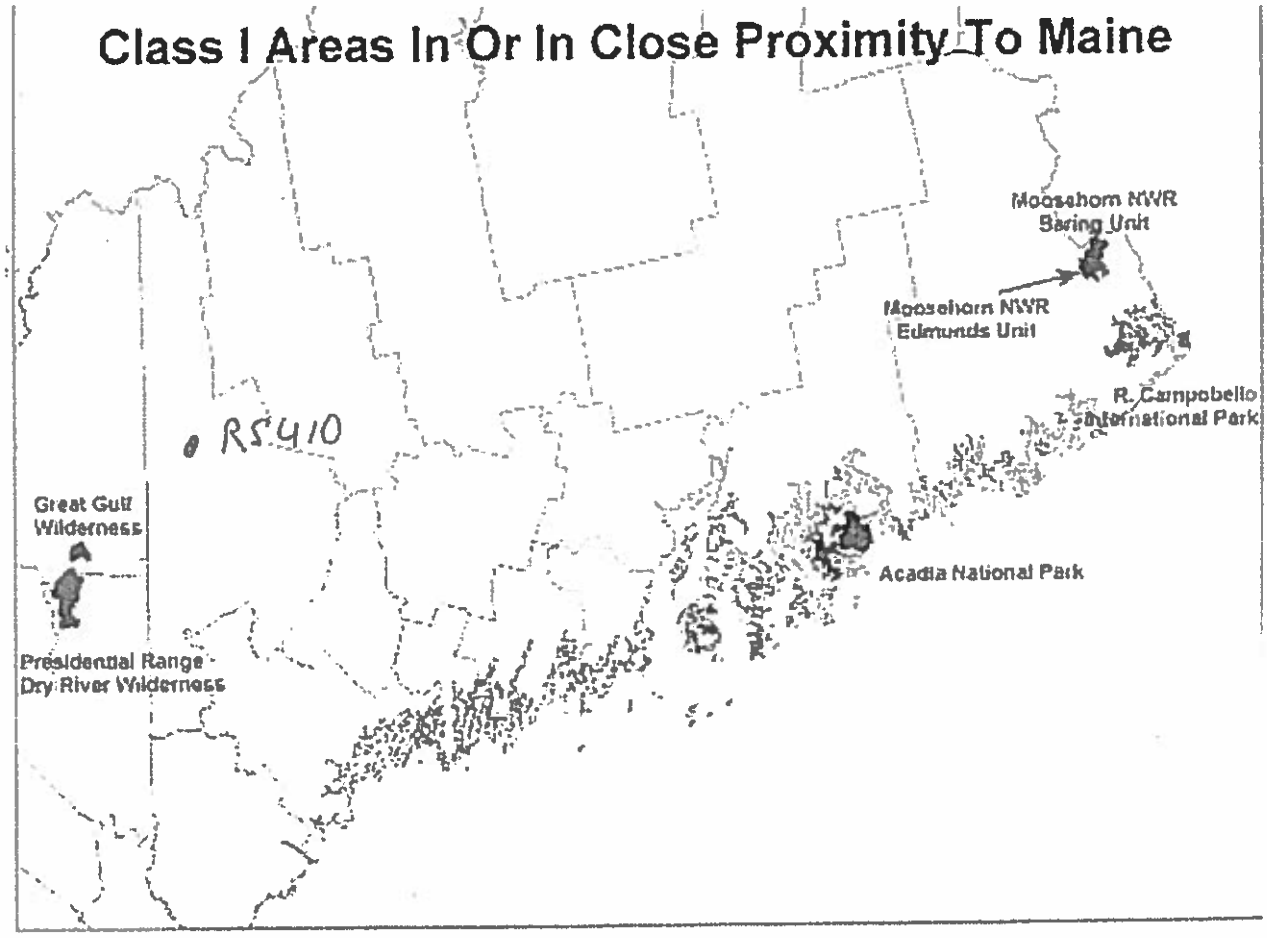
Unit	PM	PM_{10}	SO_2	NO_x	CO	VOC
Power Boiler #3	65.7	65.7	341.6	525.6	262.8	19.7
Cogen Boiler #6	82.8	82.8	772.6	1,655.6	1,090.0	22.1
Cogen Boiler #7	82.8	82.8	772.6	1,655.6	1,090.0	22.1
Lime Kiln	105.1	105.1	100.7	227.8	170.8	8.8
Recovery Boiler C	379.7	284.7	903.6	941.7	972.4	16.2
Smelt Tank C	70.1	69.2	24.1	--	--	--
R10 Air Floatation Dryers	15.2	15.2	0.1	19.6	2.7	0.7
TM-1 and dryers	19.3	9.7	0.1	11.7	57.1	39.1
Building Air Heaters	2.0	2.0	0.2	40.6	40.6	2.2
Cogen Emergency Generator	0.1	0.1	0.1	1.6	0.4	0.1
R15 Emergency Generator	0.1	0.1	0.1	1.4	0.3	0.1
Mill Emergency Diesel Generator	0.2	0.2	0.1	4.4	1.2	0.1
Diesel Fire Water Pump	0.1	0.1	0.1	1.8	0.4	0.1
Lift Pump Emergency Generator	0.1	0.1	0.1	2.1	1.1	2.1
Lime Kiln Auxiliary Drive	0.1	0.1	0.1	0.3	0.1	0.1
Groundwood Operations	--	--	--	--	--	36.0
Total TPY	**823.4**	**717.9**	**2,916.2**	**5,089.8**	**3,689.9**	**169.5**

Western Foothill Regional District - RSU #10

Maine Volkswagen Environmental Mitigation Action

Round #1

Attachment E:



Western Foothill Regional District - RSU #10

Maine Volkswagen Environmental Mitigation Action

Round #1

Attachment F Verified Funding:

RSU 10 Bus purchase strategy is to purchase at least 2 new school buses a year. With the funding percentage given in this program of 80% funded by the Maine Volkswagen Action and 20% funded by RSU #10 it would fall within our regularly budgeted process.

Scott Holmes, Director of Transportation — Date 9/14/18

Leah Kaulback, RSU #10 Business Manager — Date 9/14/18

ATTACHMENT G

The milestones included in this template are provided as guidance. Action Proponents may substitute other milestones that suit their purpose.

Projected Action Schedule	
Milestone	**Estimated Date**
MaineDOT Requests Round 1 Proposals for Actions to be funded by VW Environmental Mitigation Settlement	9/15/18
Action Proponent or Agent Submits Proposal to MaineDOT	2018
MaineDOT Provides Written Approval of Action Proponent's Proposal	2018
Action Proponent Enters Contract with MaineDOT	2018/19
MaineDOT verifies funding approval by incorporating Action into Maine Beneficiary Mitigation Plan	2018/19
Trustee Acknowledges Receipt of Project Certification and Funding Direction	2018/19
Action Proponent Obtains Cost Share, Notifies or Certifies to MaineDOT	2018/19
Action Installation(s)/Delivery	2018/19
Submit Proof of Delivery or Work Completed to MaineDOT by providing copies of the vehicle title and receipt for vehicle, equipment, or service.	2018/19
Submit Proof of Scrapping of Replaced Vehicle or Engine to MaineDOT	Upon Delivery
MaineDOT Remits Committed Funding to Action Proponent	
Due date of first Status Report and Maintenance Record to MaineDOT (six months after funding award)	
MaineDOT Reports Action Completion to Trustee	

Western Foothill Regional District - RSU #10

Maine Volkswagen Environmental Mitigation Action

Round #1

Attachment H: Benefit period

RSU #10's action plan involves the purchase of 10 propane powered school buses. RSU #10 will then each year purchase only Propane fired buses until 90% of the fleet has been turned over to Propane. This initial purchase using the VW grant money will kick start this plan and allow us in 10 years to eliminate all diesel operated School buses used on our to and from school bus runs. The goal will be to have 30 propane powered school buses in 10 years.

Switching to propane autogas not only benefits the environment, it also allows RSU #10 to lower it's bottom line in total cost of operation. We anticipate this move will lower their fuel costs by up to 40 percent with less maintenance costs over time. by switching to propane autogas. We anticipate a savings, between fuel costs and maintenance cost, up to $3500 per bus per year. 10 buses would show a huge savings in our bottom line. In 10 years 30 buses would be a significant savings.

RSU #10 provides maintenance for its current fleet of buses and will continue to do so with this purchase. Our maintenance plan will not be changed but augmented to be able to provide service, inspection, and preventive maintenance on the additions to the fleet.

RSO #10 will take advantage of School bus manufacturers, propane system suppliers, and educational organizations that offer numerous training programs for technicians who work on propane buses.All Mechanics in the District bus garage will be certified to work on the new systems.

ATTACHMENT I

Authorized Agent Certification

The Authorized Agent certifies that they have been authorized by the Project Proponent to submit this application, that the Project Proponent agrees to all the program requirements, and that the information provided is an accurate representation of the project.

Action Proponent's Signature: _____

Date: 9-14-18

Authorized Agent's Signature: _____
(if different from Action Proponent)

Date: _____

Action Proponent Signature

The Action Proponent certifies that the action(s) is/are accurately described in this application. Signature indicates that the action(s) comply with all requirements of the Volkswagen Environmental Mitigation Settlement, provides the designated level of cost share funds, and a willingness to enter an agreement with the Maine Department of Transportation requiring the Action Proponent to administer the project abiding to federal, State, and local requirements. The Action Proponent also accepts responsibility for submitting progress reports during the term of the project and providing future maintenance of the completed action through 2027.

Action Proponent(s): RSU10 **Title:** Director of Transportation

Phone#: 207-418-7062 **Email:** sholmes@rsu10.org

_____ 9-14-18

Signature(s) ***Date***