

## AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

Organization: Olympic Region Clean Air Agency

AQWDSMK-1921-ORCAA-00011  
Version Date: 01/29/2021 10:45:55

### General Information

Project Title	OLYMPIC REGION CLEAN AIR AGENCY (ORCAA) WOODSMOKE REDUCTION
Project Short Description	Improve local air quality by reducing PM2.5 pollution originating from uncertified wood stoves. Grant will provide incentives to residents to replace old wood stoves with cleaner options, such as gas stoves and electric heat pumps. Where Natural Gas is not available, pellet stoves and efficient woodstoves may be installed in place of the old, uncertified stoves. Users of wood stoves will also be provided with educational materials focused on proper clean-burning techniques and practices.
Project Long Description	<p>The Olympic Region Clean Air Agency's 2019/2021 Wood Smoke Reduction Project achieves its project goal by eliminating polluting devices in the densely-populated areas of Thurston County, and around the urban cores of Mason and Clallam Counties. The project replaces uncertified and pre-2000 wood stoves and fireplace inserts – as well as other qualifying solid-fuel combustion devices – with zero or low emission natural gas, propane or electric heating appliances. Where gas is not viable, (Mason and Clallam Counties), low-emission pellet stoves may be installed.</p> <p>By eliminating cordwood-burning devices rather than just replacing older models with newer versions, ORCAA's program improves air quality while also improving energy efficiency throughout the region. ORCAA's partners, including Puget Sound Energy (PSE), Clallam County PUD, and Mason County PUD, will help achieve these shared project goals by continuing their own incentive programs to bolster ORCAA's project.</p> <p>During this new program, ORCAA will provide \$1,200 for all change-outs from wood-burning devices to natural gas or propane appliances, and \$1,800 for highly efficient ductless (or ducted) heat pumps. In the urban areas of Shelton (Mason Co.), Port Angeles, and Sequim (both in Clallam Co.) where natural gas is not an option, we'll provide \$750 for changing out to clean-burning pellet stoves.</p> <p>Additionally, the program offers an incentive of \$500 for the removal and destruction of qualified wood-burning devices. The incentive will be of interest to residents who would like to remove an old, inefficient wood stove, but aren't willing to completely convert to gas or electric. ORCAA would also allow higher levels of payment (up to 100% cost recovery, depending upon need) for up to six (6) qualified low-income projects. Details of this segment of the project are included in Admin task #5.</p> <p>The removal of these 212 stoves would reduce total PM emissions in the communities by upwards of 16.5 tons per year and cut CO emissions by nearly 62.4 tons per year.</p> <p>The proposed project areas include: (1) The urban core of all Thurston County</p>

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## General Information

Cities and locations within five miles of the associated Urban Growth Areas (UGAs) surrounding those cities; (2) The Mason County urban core of Shelton and locations within five miles of the associated UGA; (3) The Clallam County urban cores of Port Angeles and Sequim and locations within five miles of the associated UGAs.

ORCAA's PM2.5 monitor in Lacey serves as a reference for ambient air quality throughout Thurston County. In 2015/2016, the agency's Air Monitoring team conducted a county-wide Saturation Study to ensure the existing nephelometer was placed in the best location to provide a solid reference for the county. The study consisted of collocating one new ambient monitor, MetOne Profiler 212-2, with the old permanent monitor and placing three other identical MetOne profilers at various locations throughout the county. These additional sites were chosen to comply with criteria set out by the Washington State Department of Ecology (ECY) and the Environmental Protection Agency (EPA) for ambient air quality monitoring. In addition, we looked at population density, emission sources, and meteorology to determine the best locations for the monitors. An identical study was conducted in Clallam County previously, and another is ongoing in Mason County.

The data showed the regional variability in ambient air quality and allowed us to identify the areas where human exposure to poor air quality is most problematic. The collected data confirms the communities identified in this grant request in Clallam, Mason, and Thurston Counties are indeed at-risk communities eligible site this grant.

The actual 3-year average PM2.5 design values are:

- Clallam Co - 24.9 ug m-3
- Mason Co - 19.9 ug m-3
- Thurston - 25.27 ug m-3

Total Cost \$295,000.00\* Total Eligible Cost \$295,000.00\*

Effective Date 7/1/2019 Expiration Date 6/30/2021

Ecology Program Air Quality

Project Category\*  
✓ Change Out and additional strategies  
Bounty Only  
Pilot Only

Will Environmental Monitoring Data be collected? No

Overall Goal Wood Smoke Reduction Grants are provided to fund programs designed to reduce fine particle pollution (ambient PM2.5) in communities that violate, or are at

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### **General Information**

risk of violating, federal clean air standards. These grants are awarded on a competitive basis only to Washington air agencies and Ecology Regional Offices .

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### Project Characterization

#### Project Themes

Select a primary and secondary theme that best describes the work to be achieved during this project.

Primary Theme:	Air Quality
Secondary Theme(s):	Decrease particulate pollution from wood smoke Prevent Non-Attainment Wood Smoke Reduction

#### Project Website

If your project has a website, please enter the web address below. After entering a website and saving, another blank row will appear. Up to three websites may be provided.

Website Title/Name	Web Address
Wood Smoke Reduction Program	<a href="https://www.orcaa.org/residential-programs/wood-stoves-fireplaces-pellet-stoves/wood-smoke-reduction-program/">https://www.orcaa.org/residential-programs/wood-stoves-fireplaces-pellet-stoves/wood-smoke-reduction-program/</a>
Burn Dry Firewood	<a href="http://burndryfirewood.com/">http://burndryfirewood.com/</a>
Project ZONE Map	<a href="http://bit.ly/ORCAA-UGA-maps">http://bit.ly/ORCAA-UGA-maps</a>

**Recipient Contacts**

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**Project Manager**

Dan Nelson

*Contact Information*

Dan Nelson  
Public Information Officer  
2940 Limited Lane NW  
Olympia, Washington 98502  
(360) 539-7610

dan.nelson@orca.org

**Authorized Signatory**

Francea McNair

*Contact Information*

Francea McNair  
Executive Director  
2940 Limited Lane NW  
Olympia, Washington 98502  
(360) 539-7610  
(360) 491-6308  
fran.mcnair@orca.org

**Billing Contact**

Lynn Harding

*Contact Information*

Lynn Harding  
Administrative Services Mgr  
2940 Limited Lane NW  
Olympia, Washington 98502

**Recipient Contacts**

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(360) 536-7610  
(360) 491-6308  
lynn.harding@orca.org

**Other recipient signatures on printed agreement**

**Name**

**Title**

Scope of Work - Additional Tasks: 1 - Thurston County Program

Task Number	1		
Task Title	Thurston County Program	Task Cost	\$124,800.00*
Task Description	<p>ORCAA's 2019/21 Wood Smoke Reduction Project achieves its project goal in Thurston County by eliminating polluting devices in and around the densely populated regions of the county. The project replaces uncertified and pre-2000 wood stoves and fireplace inserts—as well as other qualifying solid-fuel combustion devices—with natural gas, propane, or electric heating appliances. The program targets residents using wood as a primary heat source and will include outreach materials in Spanish to be distributed through multiple channels (see Task 4).</p> <p>By eliminating rather than replacing solid-fuel burning devices, ORCAA's program improves air quality while also improving energy efficiency throughout the region. ORCAA's partners—including Puget Sound Energy (PSE) and Thurston Energy—will help achieve these shared project goals by continuing their own incentive programs to bolster and promote ORCAA's project.</p> <p>During this new program, ORCAA will provide \$1,200 for change-outs from wood-burning devices to natural gas or propane appliances and \$1,800 for highly efficient ductless heat pumps. Additionally, the program offers a wood stove recycling incentive of \$500 for the removal and destruction of qualified wood-burning devices. During the past three full-term grant cycles, ORCAA has proven the ability to fully use all allocated grant dollars and make full use of additional funds when available *. We anticipate easily spending these funds by the end of the grant term.</p> <p>(*During the abbreviated 2017/19 cycle, ORCAA was able to expend 80 percent of funds in less than 50 percent of the program's original term.)</p> <p>The program requires all change-outs to be conducted by professional installers, and disbursement of funds will be to the vendors/installers rather than the homeowners to help guarantee this. Those vendors will also be required to acquire and abide by all pertinent local permits and coding requirements.</p> <p>We expect to conduct 36 wood stove recycling incentive removals, 38 change-outs to natural gas, and 34 change-outs to heat pumps (most involving ductless heat pumps, but a handful going to fully ducted heat pump</p>		

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**Scope of Work - Additional Tasks: 1 - Thurston County Program**

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systems). The removal of these 108 stoves would reduce total PM emissions in the communities by upwards of 8.4 tons per year and cut CO emissions by nearly 31.8 tons per year. ORCAA would also allow higher payment levels (up to 100 percent cost recovery) for up to five qualified low-income projects. Details included in Task 5.

The proposed project area includes the urban core of Lacey, Olympia, Tumwater, Yelm, Rainier, Tenino, and Grand Mound, as well as locations within five miles of the associated UGAs surrounding those cities. These areas frequently exceed 20 ug/m<sup>3</sup> of PM pollution during burn season. ORCAA's PM<sub>2.5</sub> monitor is located at 1900 College St SE, Lacey, as a reference for ambient air quality throughout Thurston Co. In 2015/16, ORCAA conducted an in-depth Saturation Study to ensure the county nephelometer was placed in the best location to provide a solid reference for the county. The study consisted of collocating one new ambient monitor – MetOne Profiler 212-2 – with the old permanent monitor – an M903 nephelometer – and placing three other identical profilers at various locations throughout the county. The study confirmed the location validity of the existing monitor. This monitor is used to make county-wide air quality policy decisions, such as calling air quality burn bans.

**Task Goal Statement**

Working closely with our partners, other government agencies, and private/public associations such as Puget Sound Energy, Thurston Energy, and local homeowners associations (HOAs), ORCAA will "change out" 34 pre-2000 or uncertified wood stoves or fireplace inserts with high-efficiency heat pumps, and 38 pre-2000 or uncertified wood stoves or fireplace inserts with natural gas (or propane) appliances. These replacements will take place in the cities and within 5 miles of UGAs of Thurston County which threaten to exceed 20 ug/m<sup>3</sup> of PM pollution during burn season. Because the new installations will NOT include solid-fuel combustion, these replacements will remove upwards of 5.6 tons of Particulate Matter (PM) pollution per year.

The wood stove recycling program would remove upwards of 36 uncertified or pre-2000 wood stoves and fireplace inserts from the population centers surrounding the UGAs in Thurston Co. This task would be coupled with an aggressive education and outreach program designed to improve the burning practices of those who continue to use wood stoves for home heating. The wood stove recycling project would result in upwards of 2.8 tons of PM pollution being reduced annually.

**Task Expected Outcomes**

All removed devices in the program will be certified as destroyed and recycled. Documented evidence will include a photo of the removed device and a Certificate of Destruction signed by a local metal recycler. We



Scope of Work - Additional Tasks: 1 - Thurston County Program

expect the removal of approximately 108 old, uncertified wood stoves and fireplace inserts will result in a reduction of up to 8.4 tons of Particulate Matter (PM) pollution per year.

Recipient Task Coordinator

Deliverables

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
1.1	Signed confirmation of program compliance for each device removed	6/30/2021						
1.2	Pictures of all removed devices	6/30/2021						
1.3	Confirmed estimate of annual cord-wood usage for each wood stove replaced	6/30/2021						
1.4	Signed Certificate of Destruction & Recycling for each device removed	6/30/2021						
1.5	Dated Invoice/Sales Receipt documenting new appliance installed w/ make and model as well as Serial	6/30/2021						

**Scope of Work - Additional Tasks: 1 - Thurston County Program**

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Numbers.

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**Scope of Work - Additional Tasks: 2 - Mason County Project**

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Task Number	2		
Task Title	Mason County Project	Task Cost	\$9,400.00*
Task Description	<p>ORCAA's 2019/21 Wood Smoke Reduction Project achieves its project goal in Mason County by eliminating polluting devices in and around the densely populated regions of the county. The project replaces uncertified and pre-2000 wood stoves and fireplace inserts—as well as other qualifying solid-fuel combustion devices—with natural gas, propane, or electric heating appliances. The program targets residents using wood as a primary heat source and will include outreach materials in Spanish to be distributed through multiple channels. (See outreach task, #4).</p> <p>By eliminating solid-fuel burning devices rather than just replacing older models with newer, cleaner, appliances, ORCAA's program improves air quality while also improving energy efficiency throughout the region. ORCAA will partner with the Mason County PUD to promote our program alongside their drives to get residents using cleaner, more efficient heating systems.</p> <p>During this new program, ORCAA will provide \$1,200 for change-outs from wood burning devices to propane appliances, and \$1,800 for highly efficient ductless heat pumps. Since natural gas is not available in the targeted Mason County communities, we will offer a \$750 incentive for change-outs to low-emission Wood Pellet stoves. Additionally, the program offers a wood stove recycling incentive of \$500 for removal and destruction of qualified wood burning devices. During the past three full-term grant cycles, ORCAA has proven the ability to fully use all allocated grant dollars and make full use of additional funds when available* . We anticipate easily spending the 2019/21 funds by the end of the grant term. (*During the abbreviated 2017/19 cycle, ORCAA was able to expend 80 percent of funds in less than 50 percent of the program's original term.)</p> <p>The program requires all change-outs to be conducted by professional installers, and disbursement of funds will be to the vendors/installers rather than the homeowners to help guarantee that fact. Those vendors will also be required to acquire and abide by all pertinent local permits and coding requirements.</p> <p>We expect to conduct 2 wood stove recycling removals, no change-outs to pellet stoves, 1 change-out to propane, and 4 change-outs to heat pumps (most involving ductless heat pumps, but a handful going to fully</p>		

**Scope of Work - Additional Tasks: 2 - Mason County Project**

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ducted heat pump systems). The removal of these 7 stoves would reduce total PM emissions in the communities by upwards of 0.6 tons per year and cut CO emissions by nearly 8.5 tons per year. ORCAA would also allow higher payment levels (up to 100 percent cost recovery) for one qualified low-income projects. Details included in Admin Task, #5.

The proposed project area includes the City of Shelton and its Urban Growth Area, and locations within five miles of the associated UGAs surrounding those cities. These areas frequently approach or exceed, 20 ug/m<sup>3</sup> of PM pollution during burn season. ORCAA's PM<sub>2.5</sub> monitor is located at 122 W. Franklin, Shelton, as a reference for ambient air quality throughout Mason County. ORCAA is currently conducted an in-depth Saturation Study to ensure the county nephelometer was placed in the best location to provide a solid reference for the county.

Task Goal Statement

Working closely with our partners, other government agencies, and private/public associations such as Mason County PUD and local homeowners associations (HOAs), ORCAA will "change out" 4 pre-2000 or uncertified wood stoves or fireplace inserts with high-efficiency heat pumps, 1 with natural gas (or propane) appliances, and none with low-emission pellet-fueled stoves. These replacements will take place within 5 miles of the UGA associated with Shelton – an area which threatens to exceed 20 ug/m<sup>3</sup> of PM pollution during burn season. These replacements will remove upwards of 0.4 tons of Particulate Matter (PM) pollution per year.

The wood stove recycling program would remove 2 uncertified or pre-2000 wood stoves and fireplace inserts from the population centers surrounding the UGAs in Mason County. This task would be coupled with an aggressive education and outreach program designed to improve the burning practices of those who continue to use wood stoves for home heating. The wood stove recycling project would result in upwards of 0.2 tons of PM pollution being reduced annually.

Task Expected Outcomes

All removed devices in the program will be certified as destroyed and recycled. Documented evidence will include a photo of the removed device and a Certificate of Destruction signed by a local metal recycler. We expect the removal of 29 old, uncertified wood stoves and fireplace inserts will result in a reduction of up to 0.6 tons of Particulate Matter (PM) pollution per year.

Recipient Task Coordinator

AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

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Scope of Work - Additional Tasks: 2 - Mason County Project

Deliverables

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
2.1	Signed confirmation of program compliance for each device removed	6/30/2021						
2.2	Pictures of all removed devices	6/30/2021						
2.3	Confirmed estimate of annual cord-wood usage for each wood stove replaced	6/30/2021						
2.4	Signed Certificate of Destruction & Recycling for each device removed	6/30/2021						
2.5	Dated Invoice/Sales Receipt documenting new appliance installed w/ make and model as well as Serial Numbers.	6/30/2021						

Scope of Work - Additional Tasks: 3 - Clallam County Project

Task Number	3		
Task Title	Clallam County Project	Task Cost	\$20,050.00*
Task Description	<p>ORCAA's 2019/21 Wood Smoke Reduction Project achieves its project goal in Clallam County by eliminating polluting devices in and around the densely populated regions of the county. The project replaces uncertified and pre-2000 wood stoves and fireplace inserts—as well as other qualifying solid-fuel combustion devices—with natural gas, propane, or electric heating appliances. The program targets residents using wood as a primary heat source and will include outreach materials in Spanish to be distributed through multiple channels. (See outreach task, #4).</p> <p>By eliminating solid-fuel burning devices rather than just replacing older models with newer, cleaner, appliances, ORCAA's program improves air quality while also improving energy efficiency throughout the region. ORCAA will partner with the Clallam County Department of Community Development and the Clallam County PUD to promote our program alongside their drives to get residents using cleaner, more efficient heating systems.</p> <p>During this new program, ORCAA will provide \$1,200 for change-outs from wood-burning devices to propane appliances and \$1,800 for highly efficient ductless heat pumps. Since natural gas is not available in the targeted Clallam County communities, we will offer a \$750 incentive for change-outs to low-emission Wood Pellet stoves. Additionally, the program offers a wood stove recycling incentive of \$500 for the removal and destruction of qualified wood-burning devices. During the past three full-term grant cycles, ORCAA has proven the ability to fully use all allocated grant dollars and make full use of additional funds when available *. We anticipate easily spending the 2019/21 funds by the end of the grant term. (*During the abbreviated 2017/19 cycle, ORCAA was able to expend 80 percent of funds in less than 50 percent of the program's original term.)</p> <p>The program requires all change-outs to be conducted by professional installers, and disbursement of funds will be to the vendors/installers rather than the homeowners to help guarantee that fact. Those vendors will also be required to acquire and abide by all pertinent local permits and coding requirements.</p> <p>We expect to conduct 5 wood stove recycling removals, 5 change-outs to pellet stoves, 4 change-outs to</p>		

**Scope of Work - Additional Tasks: 3 - Clallam County Project**

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propane, and 5 change-outs to heat pumps (most involving ductless heat pumps, but a handful going to fully ducted heat pump systems). The removal of these 19 stoves would reduce total PM emissions in the communities by upwards of 1.5 tons per year and cut CO emissions by nearly 5.6 tons per year. ORCAA would also allow higher payment levels (up to 100 percent cost recovery) for up to two qualified low-income projects. Details included in Admin Task, #5.

The proposed project area includes the cities of Port Angeles and Sequim, their UGAs, and locations within five miles of the associated UGAs surrounding those cities. These areas frequently exceed 20 ug/m3 of PM pollution during burn season. ORCAA's PM2.5 monitor is located at 102 E 5th St, Port Angeles, as a reference for ambient air quality throughout Clallam County. In 2013/14, ORCAA conducted an in-depth Saturation Study to ensure the county nephelometer was placed in the best location to provide a solid reference for the county.

**Task Goal Statement**

Working closely with our partners, other government agencies, and private/public associations such as Clallam County PUD, Clallam County Department of Community Development, and local homeowners associations (HOAs), ORCAA will replace 5 pre-2000 or uncertified wood stoves or fireplace inserts with high-efficiency heat pumps, 4 with propane appliances, and 5 with low-emission pellet-fuel stoves. These replacements will take place in Sequim or Port Angeles, or within 5 miles of UGAs of those cities, which threaten to exceed 20 ug/m3 of PM pollution during burn season. These replacements will remove upwards of 1.1 tons of Particulate Matter (PM) pollution per year.

The wood stove recycling program would remove 5 uncertified or pre-2000 wood stoves and fireplace inserts from the population centers surrounding the UGAs in Clallam County. This task would be coupled with an aggressive education and outreach program designed to improve the burning practices of those who continue to use wood stoves for home heating. The wood stove recycling project would result in upwards of 0.4 tons of PM pollution being reduced annually.

**Task Expected Outcomes**

All removed devices in the program will be certified as destroyed and recycled. Documented evidence will include a photo of the removed device and a Certificate of Destruction signed by a local metal recycler. We expect the removal of 19 old, uncertified wood stoves and fireplace inserts will result in a reduction of up to 1.5 tons of Particulate Matter (PM) pollution per year.

**Recipient Task Coordinator**

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Scope of Work - Additional Tasks: 3 - Clallam County Project

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Deliverables

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
3.1	Signed confirmation of program compliance for each device removed	6/30/2021						
3.2	Pictures of all removed devices	6/30/2021						
3.3	Confirmed estimate of annual cord-wood usage for each wood stove replaced	6/30/2021						
3.4	Signed Certificate of Destruction & Recycling for each device removed	6/30/2021						
3.5	Dated Invoice/Sales Receipt documenting new appliance installed w/ make and model as well as Serial Numbers.	6/30/2021						



**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

**Scope of Work - Additional Tasks: 4 - Education & Outreach**

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Task Number	4		
Task Title	Education & Outreach	Task Cost	\$9,750.00*
Task Description	<p>Working closely with partner agencies and businesses, ORCAA staff will redesign and update materials and messages to help promote the program(s) to our targeted neighborhoods. Outreach efforts will utilize mainstream media (newspaper and radio), social media (Facebook, Twitter, Instagram, etc.), ORCAA's websites (www.orcaa.org, www.waburnbans.net, www.airwatchnw.org) and direct mail. We will also provide in-store promotional materials to help our hearth product/HVAC retailers educate their customers about the benefits of eliminating wood burning, in favor of cleaner, more efficient devices. For customers who want to continue to burn, we'll recruit those vendors to help teach their customers operating methods to help reduce wood smoke while using their appliances.</p> <p>ORCAA plans to translate their outreach materials into Spanish-language versions for distribution to neighborhoods where Spanish is a primary language. ORCAA's outreach team will work with local Home Owners Associations (HOAs), neighborhood associations (NAs), county extension agencies, and schools to distribute those Spanish-language materials. As part of a partnership with the targeted cities and county areas, ORCAA will coordinate with the utility and billing departments of the various jurisdictions to include program outreach materials — English and Spanish versions, where applicable — in residential utility bills.</p> <p>ORCAA staff will participate in local Home &amp; Gardner consumer shows to promote the wood smoke reduction program and attend meetings of local HOAs and NAs to share promote participation in the change-outs. We also plan to work with local realtors and realtor associations to get knowledge of the program out to potential home sellers and buyers.</p> <p>ORCAA will also conduct targeted messaging focused on large-volume burners (&gt;1 cord per year) and those who rely on wood heat as their primary heat source in an effort to maximize the air pollution reductions with each change-out.</p> <p>As part of the outreach regarding clean burning techniques for those who continue to use wood-heat for their homes, ORCAA maintains a stand-alone website, BurnDryFirewood.org, (established in coordination with ECY and other regional air quality agencies in Washington). This site provides instruction on how to burn</p>		

**Scope of Work - Additional Tasks: 4 - Education & Outreach**

cleanly, as well as construction plans for building a simple wood-shed to ensure firewood is kept dry while curing. The site has a host of affiliated printed materials that will be used extensively by ORCAA in an ongoing education program regarding the clean, efficient use of wood-heating devices.

**Task Goal Statement**

By using ORCAA's Social Media Channels as well as those of our partners, we can reach tens of thousands of potential program participants online. We will also provide live programs at meetings and written materials suitable for newsletters and mailing to area Home Owners Associations, neighborhood associations, and community groups. In neighborhoods where we can identify heavy concentrations of wood stove use — as well as in lower income or minority communities — we will conduct direct-mail outreach using the US Postal Services improved Every Door Direct Mail program for customized, targeted messaging. When appropriate, that customized outreach message will be provided in Spanish language versions as well.

**Task Expected Outcomes**

Through extensive Outreach and Education efforts, we fully expect to expend the full grant amount before the contract term ends. By reaching deep within the community with information about responsible burning as well as the grant itself, we hope to have long-lasting improvements in local air quality.

**Recipient Task Coordinator**

**Deliverables**

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
4.1	Describe promotional/educational activity in monthly status report	6/30/2021						
4.2	Develop and distribute program	6/30/2021						

**Scope of Work - Additional Tasks: 4 - Education & Outreach**

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- 4.3 fliers and brochures  
Provide Spanish-language translations of program materials 6/30/2021
- 4.4 Maintain and promote use of [www.BurnDryFirewood.org](http://www.BurnDryFirewood.org) 6/30/2021
- 4.5 Provide invoices, receipts or other ECY approved documentation for reimbursement. 6/30/2021

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

**Scope of Work - Additional Tasks: 5 - Administrative Costs**

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Task Number	5		
Task Title	Administrative Costs	Task Cost	\$49,050.00*
Task Description	<p>ORCAA will maintain detailed records of each transaction within this program, chronicling the details of each wood appliance removal and its destruction. ORCAA's finance department meticulously records each financial transaction. The program manager maintains records of each wood appliance removal, the volume of cordwood diverted from the use by its removal, and the type of new heating device being installed.</p> <p>ORCAA staff reports quarterly on program activity, including fiscal records, change-out numbers completed, and promotional activities are undertaken.</p> <p>As part of the fiscal strength of the program, ORCAA works closely with partner agencies and businesses, which provide additional incentives to bolster ORCAA's programs. Puget Sound Energy (PSE) provides similar grant opportunities to existing and new customers, while our contracted business partners in the Hearth and HVAC community provide upwards of 10% discounts to residents who participate this program (percentages vary from business to business).</p> <p>As part of the Outreach and Education efforts, ORCAA plans to translate pertinent outreach materials into Spanish-language versions for distribution to neighborhoods where Spanish is a primary language. ORCAA's outreach team will work with local Home Owners Associations (HOAs), neighborhood associations (NAs), county extension agencies, and schools to distribute those Spanish-language materials. As part of a partnership with the targeted cities and county areas, ORCAA will coordinate with the utility and billing departments of the various jurisdictions to include program outreach materials — English and Spanish versions, where applicable — in residential utility bills.</p> <p>Additionally, ORCAA staff plans to work with Community Action Council of Lewis, Mason &amp; Thurston Counties (CACLMT) to identify any low-income or at-need residents who would qualify for the change-out program. Working in conjunction with that group, ORCAA will make allowances for elevated levels of change-out funding, up to 100-percent coverage for as many as six (6) qualified projects (one in each community served by this program in Mason and Clallam Counties, and three total in Thurston County). Such projects would include partnerships with PSE, Clallam County PUD, and Mason County PUD to ensure the long-term viability of</p>		

**Scope of Work - Additional Tasks: 5 - Administrative Costs**

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change-outs to gas or electric in qualifying residences.

The communities we've identified for this qualifies due to the ongoing concern of elevated levels of PM 2.5 air pollution.

The actual 3-year average PM2.5 design values are:

- Clallam Co - 24.9 ug m-3
- Mason Co - 19.9 ug m-3
- Thurston - 25.27 ug m-3

**Task Goal Statement**

We will continually monitor the program, maintaining a running tally of change-outs and recycling grants to ensure we stay on, or ahead of, schedule to ensure full use of the available grant. We will provide quarterly (potentially monthly) reports on progress, total cord-wood reductions, and other pertinent data. We will also provide a final report to Ecology to close out the grant at the end of the contract term.

**Task Expected Outcomes**

We anticipate removing up to 212 old, uncertified wood stoves or fireplace inserts from the at-risk population centers in Thurston, Mason, and Clallam County. These will either be replaced under the Change Out program with zero-emission electric appliances, near-zero-emission gas appliances, low-emission pellet-fueled applications (where natural gas is not available), or simply removed and destroyed under the Wood Stove Recycling Program. These could take a combined 16.5 Tons of Particulate Matter Pollution out of these Air Sheds annually.

**Recipient Task Coordinator**

**Deliverables**

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
5.1	Confirming applicant eligibility							

**Scope of Work - Additional Tasks: 5 - Administrative Costs**

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\*Due Date: As needed throughout life of grant.

5.2 Verify project completion records 6/30/2021

5.3 Maintaining records and budget 6/30/2021

5.4 Providing supporting backup documentation when submitting reimbursement requests which includes staff name, hours worked, hourly rate, and total. 6/30/2021

AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

Scope of Work - Additional Tasks: 6 - Regional Program

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Task Number	6		
Task Title	Regional Program	Task Cost	\$81,950.00*
Task Description	<p>ORCAA's 2019/21 Wood Smoke Reduction Project achieves its project by eliminating polluting devices in and around the densely populated regions of ORCAA's jurisdiction with highest risk of violating ambient air quality standards. The project replaces uncertified and pre-2000 wood stoves and fireplace inserts—as well as other qualifying solid-fuel combustion devices—with natural gas, propane, compressed wood pellet, or electric heating appliances. The program targets residents using wood as a primary heat source and will include outreach materials in Spanish to be distributed through multiple channels. (See Outreach Task, #4).</p> <p>By replacing older models with newer, cleaner appliances, ORCAA's program improves air quality while also improving energy efficiency throughout the region. ORCAA's partners—including Puget Sound Energy (PSE), Mason County PUD, and Clallam PUD – will help achieve these shared project goals by continuing their own incentive programs to bolster and promote ORCAA's project.</p> <p>During this new program, ORCAA will provide \$1,200 for change-outs from wood-burning devices to natural gas or propane appliances, and \$1,800 for highly efficient ductless heat pumps. For qualifying addresses in Mason and Clallam Counties, there is also the option of receiving \$750 for replacing uncertified wood stoves with compressed wood pellet stoves. Additionally, the program offers a recycling grant of \$500 for the removal and destruction of qualified wood-burning devices. During the past three full-term grant cycles, ORCAA has proven the ability to fully use all allocated grant dollars and make full use of additional funds when available. We anticipate easily spending these funds by the end of the grant term.</p> <p>The program requires all change-outs to be conducted by professional installers, and disbursement of funds will be to the vendors/installers rather than the homeowners to help guarantee that fact. Those vendors will also be required to acquire and abide by all pertinent local permits and coding requirements.</p> <p>We expect to conduct 25 stove recycles, 11 change-outs to pellet stoves, 24 change-outs to natural gas, and 18 change-outs to heat pumps (most involving ductless heat pumps, but a handful going to fully ducted heat pump systems). The removal of these 78 stoves would reduce total PM emissions in the communities by upwards of 6.1 tons per year and cut</p>		

**Scope of Work - Additional Tasks: 6 - Regional Program**

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CO emissions by nearly 23 tons per year. ORCAA would also allow higher payment levels (up to 100 percent cost recovery) for up to four qualified low-income projects. Details included in Admin Task, #5.

The proposed project area includes the urban cores of Thurston, Mason, and Clallam Counties. These areas frequently exceed 20 ug/m3 of PM pollution during burn season. ORCAA's PM2.5 monitor is located at 1900 College St SE, Lacey, as a reference for ambient air quality throughout Thurston Co. In 2015/16, ORCAA conducted an in-depth Saturation Study to ensure the county nephelometer was placed in the best location to provide a solid reference for the county. The study consisted of collocating one new ambient monitor – MetOne Profiler 212-2 – with the old permanent monitor – an M903 nephelometer – and placing three other identical profilers at various locations throughout the county. The study confirmed the location validity of the existing monitor. This monitor is used to make county-wide air quality policy decisions, such as calling air quality burn bans.

**Task Goal Statement**

Working closely with our partners, other government agencies, and private/public associations such as Puget Sound Energy, Mason PUD, Clallam PUD, Thurston Energy, and local homeowners associations (HOAs), ORCAA will "change out" or directly recycle 78 pre-2000 or uncertified wood stoves or fireplace inserts. These replacements will take place in the cities and within 5 miles of UGAs of Thurston, Mason, and Clallam County which threaten to exceed 20 ug/m3 of PM pollution during burn season. Because the new installations will NOT include solid-fuel combustion, the stove replacements and recycling will remove upwards of 6.1 tons of Particulate Matter (PM) pollution per year. This task would be coupled with an aggressive education and outreach program designed to improve the burning practices of those who continue to use wood stoves for home heating.

**Task Expected Outcomes**

All removed devices in the program will be certified as destroyed and recycled. Documented evidence will include a photo of the removed device and a Certificate of Destruction signed by a local metal recycler. We expect the removal of approximately 78 old, uncertified wood stoves and fireplace inserts will result in a reduction of up to 6.1 tons of Particulate Matter (PM) pollution per year.

**Recipient Task Coordinator**



AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

Organization: Olympic Region Clean Air Agency

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Scope of Work - Additional Tasks: 6 - Regional Program

Deliverables

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
6.1	Signed confirmation of program compliance for each device removed	6/30/2021						
6.2	Pictures of all removed devices	6/30/2021						
6.3	Confirmed estimate of annual cord-wood usage for each wood stove replaced	6/30/2021						
6.4	Signed Certificate of Destruction & Recycling for each device removed	6/30/2021						
6.5	Dated Invoice/Sales Receipt documenting new appliance installed w/ make and model as well as Serial Numbers	6/30/2021						

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Scope of Work Summary**

<b>Task Title</b>	<b>Task Cost</b>
Thurston County Program	\$124,800.00
Mason County Project	\$9,400.00
Clallam County Project	\$20,050.00
Education & Outreach	\$9,750.00
Administrative Costs	\$49,050.00
Regional Program	\$81,950.00
<b>Total</b>	<b>\$295,000.00</b>

**Total Eligible Costs**  
(from the General Information Form)  
\$295,000.00

## AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

Organization: Olympic Region Clean Air Agency

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### Uploads

#### Description

Vendor Agreement Form

Thurston Co. Replacement Forms

Clallam & Mason Co. Replacement  
Forms

Residential Wood Stove Bounty Form

#### Attachments

[https://ecyeagl/IntelliGrants\\_BASE/\\_Upload/115191\\_884773-2019-21VendorAgreementform.pdf](https://ecyeagl/IntelliGrants_BASE/_Upload/115191_884773-2019-21VendorAgreementform.pdf)

[https://ecyeagl/IntelliGrants\\_BASE/\\_Upload/115191\\_884825-2019-21ApprovalandDestructionForm\\_CLALLAM-MASON.pdf](https://ecyeagl/IntelliGrants_BASE/_Upload/115191_884825-2019-21ApprovalandDestructionForm_CLALLAM-MASON.pdf)

[https://ecyeagl/IntelliGrants\\_BASE/\\_Upload/115191\\_884823-2019-21ApprovalandDestructionForm\\_THURSTON.pdf](https://ecyeagl/IntelliGrants_BASE/_Upload/115191_884823-2019-21ApprovalandDestructionForm_THURSTON.pdf)

[https://ecyeagl/IntelliGrants\\_BASE/\\_Upload/115191\\_884823\\_2-2019-21BountyandDestructionForm.docx](https://ecyeagl/IntelliGrants_BASE/_Upload/115191_884823_2-2019-21BountyandDestructionForm.docx)

## AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION

Organization: Olympic Region Clean Air Agency

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### Application Modification Comments

**Ecology Comments - Enter the date of the modification request and describe the modifications requested.**

**Applicant Comments - Enter the date of the modifications made and describe the modifications made.**

8/8/2019 – I've updated the application to reflect the reduced numbers of change-outs and bounties in each county program to fit within the budget limit of \$260,000. I also recalculated emission reduction estimates to reflect the lower number of wood stove removals. Changes made by Dan Nelson

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

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**Evaluation Summary**

<b>Number of Evaluators</b>	1
<b>Reviewer Average -</b>	100 /100
<b>TOTAL Score</b>	
<b>Final Score</b>	89*
<b>Rank</b>	2
<b>Final Review Comments</b>	

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Ecology Contacts**

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Project Manager

Grant David A.

,

Financial Manager

Johnston Carrol

,

Technical Advisor

Grant David A.

,

Fiscal Analyst

Threlkeld Denise

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**Ecology Contacts**

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**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Funding Distribution: WoodSmoke Reduction Grant 2019-21**

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**Funding Number** EG200124  
**Funding Title** WoodSmoke Reduction Grant 2019-21  
**Funding Type** Grant  
**Funding Category** Residential Wood Smoke Reduction Grant  
**Recipient Match %** 0.00%  
**InKind Interlocal Allowed** ( ) Yes  
 ( ✓ ) No  
**InKind Other Allowed** ( ) Yes  
 ( ✓ ) No  
**Agreement is match for a Federal Grant?** No

**Indirect Rate**

**Federal Funding** ( ) Approved Federally Recognized Indirect Costs Rate per 2 CFR Part 200 Appendix IV and V  
 ( ) De Minimis Rate per 2 CFR §200.414  
 ( ) Approved Rate Negotiated Between ECOLOGY and RECIPIENT  
  
**State Funding** ( ✓ ) Approved State Indirect Rate: 25%

**Funding Source**

Air Pollution Control Account 100.00%

<b>Task Title</b>	<b>Task Budget</b>
Thurston County Program	\$124,800.00
Mason County Project	\$9,400.00
Clallam County Project	\$20,050.00
Education & Outreach	\$9,750.00
Administrative Costs	\$49,050.00
Regional Program	\$81,950.00



**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Funding Distribution: WoodSmoke Reduction Grant 2019-21**

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**Funding Effective Date**  
7/1/2019

**Funding Expiration Date**  
6/30/2021

**Loan Security**

**Interest Rate**            %  
**Admin Charge**            %  
**Effective interest Rate**   0  
**Loan Terms**

**Project Start Date**  
**Project Completion Date**  
**Initiation of Operation Date**

**Final Accrued Interest**  
**Final Loan Amount**  
**Repayment Sched #**

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Funding Distribution Summary**

**By Task Funding Distribution**

<b>Recipient/Ecology Share Funding Distribution</b>	<b>Recipient Match %</b>	<b>Recipient Share</b>	<b>Ecology Share</b>	<b>Total</b>
WoodSmoke Reduction Grant 2019-21	0.00%	\$0	\$295,000.00	\$295,000.00
Total		\$0	\$295,000.00	\$295,000.00
<b>Total Eligible Costs</b> \$295,000.00			<b>Ecology Share</b> \$295,000.00	<b>Recipient Share</b> \$0

**AIR QUALITY LOCAL PARTNER RESIDENTIAL WOOD SMOKE REDUCTION**

Organization: Olympic Region Clean Air Agency

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**Agreement Information**

Agreement Template  
Organization Display Name

Simple Template  
OLYMPIC REGION CLEAN AIR AGENCY

Agreement Specific Terms and Conditions

Amortization Sched #  
Uploads