

To: Greenhouse Gas Reduction Fund Program

From: Jared Blumenfeld   
Secretary for Environmental Protection  
California Environmental Protection Agency

Richard W. Corey  
Executive Officer  
California Air Resources Board 

Date: February 5, 2019

Subject: GREENHOUSE GAS REDUCTION FUND: CALIFORNIA AIR RESOURCES  
BOARD (CARB) EXPENDITURE RECORD FOR FISCAL YEAR 2018-2019  
WOODSMOKE REDUCTION PROGRAM

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This Attestation Memorandum documents that CARB completed the attached Expenditure Record on January 16, 2019, for the Woodsmoke Reduction Program. The Expenditure Record is consistent with the statutory requirements of Government Code Section 16428.9 to support expenditures from the Greenhouse Gas Reduction Fund.

This Attestation Memorandum and Expenditure Record will be submitted to CARB for public posting on the CARB website at: [www.arb.ca.gov/caclimateinvestments](http://www.arb.ca.gov/caclimateinvestments). Questions on this Attestation Memorandum or Expenditure Record may be directed to Ms. Kasia Turkiewicz, Air Resources Engineer, at (916) 445-6497 or by email at [kasia.turkiewicz@arb.ca.gov](mailto:kasia.turkiewicz@arb.ca.gov).

Attachment

cc: Kasia Turkiewicz  
Air Resources Engineer  
California Air Resources Board

Greenhouse Gas Reduction Fund Program

February 5, 2019

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bcc: Kurt Karperos, EO  
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Cynthia Marvin, TTD  
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Record\Attestation Memo.docx

**Greenhouse Gas Reduction Fund: Expenditure Record**

**Fiscal Year: 2018-19**

California Air Resources Board  
Woodsmoke Reduction Program

**Authorizing legislation:** Item 3900-101-3228 of the Budget Act of 2018, as amended by SB 856 (Committee on Budget, Chapter 30, Budget Act of 2018) appropriates to California Air Resources Board \$3,000,000 for the Woodsmoke Reduction Program.

**Element (1) A description of each expenditure proposed to be made by the administering agency pursuant to the appropriation.**

<input type="checkbox"/> Agency that will administer funding	<ul style="list-style-type: none"> <li>California Air Resources Board (CARB) in partnership with the California Air Pollution Control Officers Association (CAPCOA) and local air pollution control districts or air quality management districts (District).</li> </ul>
<input type="checkbox"/> Amount of proposed expenditure and appropriation reference	<ul style="list-style-type: none"> <li>The total expenditure is \$3 million, per Section 3900-101-3228 of the Budget Act of 2018 (SB 856).</li> </ul>
<input type="checkbox"/> Estimated amount of expenditures for administering agency administrative costs	<ul style="list-style-type: none"> <li>Total administrative costs for CARB, CAPCOA, and Districts are estimated to be 10 percent of the total amount provided for the Woodsmoke Reduction Program (Program).</li> </ul>
<input type="checkbox"/> If applicable, identify laws or regulations that govern how funds will be used	<ul style="list-style-type: none"> <li>AB 1532 (Pérez, Chapter 807, Statutes of 2012), SB 535 (de León, Chapter 830, Statutes of 2012), SB 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012), and SB 862 (Committee on Budget and Fiscal Review, Chapter 36, Statutes of 2014) provide the general framework for how cap-and-trade auction proceeds will be administered to further the purposes of Health and Safety Code Division 25.5.</li> <li>The Budget Act of 2018, as amended by SB 856, appropriates funds and provides direction on funded programs.</li> <li>SB 563 (Lara, Chapter 671, Statutes of 2017) establishes the Woodsmoke Reduction Program and provides direction on project eligibility and program implementation.</li> </ul>
<input type="checkbox"/> Continuation of existing Expenditure Record	<ul style="list-style-type: none"> <li>This is an update to an existing Expenditure Record for Fiscal Year 2016-2017 (no funds were appropriated to the Woodsmoke Reduction Program in Fiscal Year 2017-2018). The Expenditure Record elements being updated include the following: amount of proposed expenditure, appropriation reference, and type of projects that will be eligible for funding.</li> </ul>
<input type="checkbox"/> Project type	<ul style="list-style-type: none"> <li>Woodsmoke reduction</li> </ul>

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- ☐ Describe the projects and/or measures that will be eligible for funding
- Wood stove change-out programs offering incentives towards the replacement of existing uncertified residential wood burning stoves, wood inserts, or fireplaces used for primary space heating with the following home heating devices:
    - Non-wood burning:
      - Natural gas stoves or inserts;
      - Propane stoves or inserts;
      - Electric stoves or inserts; or
      - Ductless mini-split heat pumps.
    - Wood burning:
      - Prior to May 15, 2020: wood stoves, wood inserts, pellet stoves, or pellet inserts, with particulate matter emission rates not exceeding 2.0 grams/hour, that are certified to either U.S. EPA "Step 1" or "Step 2" New Source Performance Standards;<sup>1</sup>
      - Starting on May 15, 2020: wood stoves, wood inserts, pellet stoves, or pellet inserts, with particulate matter emission rates not exceeding 2.0 grams/hour, that are certified to U.S. EPA "Step 2" New Source Performance Standards.<sup>2</sup>
  - In the case of fireplaces, if the existing fireplace is structurally sound, the Program may offer an incentive to be used towards purchase and installation of a fireplace insert. However, if the fireplace is lacking structural integrity, the incentive could be used towards the purchase of a free-standing home heating device. Both fireplace insert and free-standing home heating device must be on the list of approved replacement devices (see bullet above).
  - Woodsmoke Reduction Program has to demonstrate greenhouse gas (GHG) emission reductions resulting from the use of cleaner, more efficient heating devices.
  - Any wood stove or wood insert removed through this Program must be rendered permanently inoperable and scrapped at a recycling facility, if recycling is available in the area. If a fireplace was used as a primary source of heat prior to the change-out, the fireplace and chimney must be rendered permanently inoperable after a new eligible device is installed.
  - Eligible project costs include the cost of the new device and installation, including any parts, materials, or labor required for energy-efficient and safe installation, compliance with all State
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<sup>1</sup> Both Step 1 and Step 2 stoves with certified particulate matter emission rates of no more than 2.0 grams/hour are eligible. The list of U.S. EPA certified wood heaters can be found at <https://www.epa.gov/compliance/list-epa-certified-wood-stoves>.

<sup>2</sup> The list of Step 2 compliant heaters can be found at <https://www.epa.gov/compliance/list-epa-certified-wood-stoves>. U.S. EPA has requested comment on postponing the compliance deadline for retail of non-Step 2-compliant heaters and pellet stoves and inserts (83 Fed. Reg. 61,574 (Nov. 30, 2018)). Regardless of any postponement of the compliance deadline, the Woodsmoke Reduction Program will only offer incentives toward change-out with Step 2-compliant devices after May 15, 2020.

	<p>and local laws and regulations pertaining to installation of home heating devices, and the disposal of the high-polluting stove.</p> <ul style="list-style-type: none"> <li>▪ The incentive amount for each change-out will be established by CAPCOA or the District. Some households may qualify for full replacement costs.</li> <li>▪ The replacement device must be installed by an appropriately licensed installer participating in the Program and meet all State and local fire and building codes.</li> </ul>
<input type="checkbox"/> Intended recipients	<ul style="list-style-type: none"> <li>▪ The Program, administered by CARB, will be implemented by CAPCOA, in coordination with the Districts. CAPCOA will determine how much funding to award to each participating District for the Program.</li> <li>▪ California residents using an uncertified wood stove, wood insert, or fireplace as a primary heat source in Districts awarded GGRF funds are eligible for this Program.</li> <li>▪ Low-income households and households located in disadvantaged and low-income communities will qualify for higher incentives, up to the full cost of purchase and installation of new heating device and disposal of the old stove or insert.</li> <li>▪ All other households will be eligible for a partial cost incentive to be determined by CAPCOA or the District.</li> </ul>
<input type="checkbox"/> Program structure and process for selecting projects for funding	<ul style="list-style-type: none"> <li>▪ CAPCOA will select Districts to advertise and implement wood burning device replacement projects focusing on maximizing benefits to priority populations.<sup>3</sup></li> <li>▪ Districts will establish their own processes for distributing funds considering the overall Program goal of directing funds to low-income households and households in disadvantaged communities.</li> <li>▪ CAPCOA or individual Districts will formally recruit and select certified retailers and contractors.</li> </ul>

**Element (2) A description of how a proposed expenditure will further the regulatory purposes of Division 25.5 (commencing with Section 38500) of the Health and Safety Code, including, but not limited to, the limit established under Part 3 (commencing with Section 38550) and other applicable requirements of law.**

<input type="checkbox"/> How the expenditure is consistent with the Investment	<ul style="list-style-type: none"> <li>▪ AB 1532 (Chapter 807, Statutes of 2012) requires that monies from the Fund be appropriated in a manner that is consistent with the three-year Investment Plan. The "Cap-and-Trade Auction Proceeds Second Investment Plan: Fiscal Years 2016-17 through</li> </ul>
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<sup>3</sup> Priority populations include residents of: (1) census tracts identified as disadvantaged by California Environmental Protection Agency per SB 535; (2) census tracts identified as low-income per AB 1550; or (3) a low-income household per AB 1550. See Funding Guidelines, Section VII.B, for more information on the definitions of priority populations.



Plan and the Scoping Plan	<p>2018-19" recommends support for energy efficiency and renewable energy projects for residential, commercial, industrial, and public buildings. In addition, the Investment Plan specifically describes and recommends the types of projects that will be funded by expenditures under the Program. Therefore, the expenditures covered by this record are consistent with the Investment Plan and align with the priorities expressed in the Plan.</p> <ul style="list-style-type: none"> <li>California's 2017 Climate Change Scoping Plan (Scoping Plan) identified key strategies and recommendations to continue reducing GHG emissions and achieve the goals and purposes of AB 32 and related statutes. As California's energy sector is associated with about half of the State's near-term GHG emissions, efforts to reduce energy-related emissions are a key component of the Scoping Plan. Recommended actions related to the energy sector in the Scoping Plan include promotion of energy efficiency. The expenditures included in this record foster energy efficiency through the replacement of existing uncertified, inefficient wood stoves, wood inserts, and fireplaces with certified, high-efficiency units with a corresponding reduction in GHG emissions.</li> </ul>
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**Element (3) A description of how a proposed expenditure will contribute to achieving and maintaining greenhouse gas emission reductions pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.**

<input type="checkbox"/> Describe how expenditures will facilitate the achievement of GHG emission reductions in the State	<ul style="list-style-type: none"> <li>Switching from an uncertified wood stove, wood insert, or fireplace to a U.S. EPA certified wood stove, wood insert, pellet stove, or pellet insert reduces the GHG emissions due to cleaner and more efficient burning.           <ul style="list-style-type: none"> <li>Cleaner-burning stoves emit less methane.<sup>4</sup></li> <li>Due to the increased efficiency, certified stoves typically burn 20 percent less wood to produce the same amount of heat as the uncertified stove.<sup>5</sup> Reducing the amount of wood burned by 20 percent reduces the GHG emissions by approximately the same amount.</li> </ul> </li> <li>Switching from an uncertified wood stove, wood insert, or fireplace to a natural gas, propane or an electric heat results in a net reduction of GHG emissions. In the absence of a mechanism to verify that the wood burned in a residential wood stove is waste material harvested pursuant to an approved timber management plan prepared in accordance with the Z'berg-Nejedly Forest Practice Act of 1973 or other locally or nationally approved plan and harvested for the purpose of forest fire fuel reduction or forest</li> </ul>
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<sup>4</sup> Residential wood stove emissions are in AP 42, Fifth Edition, Volume I, Chapter 1, External Combustion Sources, Section 1.10, web link: <https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s10.pdf>

<sup>5</sup> Ibid.

stand improvement, biogenic CO<sub>2</sub> is included in the calculation of GHG benefits.

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| <input type="checkbox"/> Explain when GHG emission reductions and/or co-benefits are expected to occur and how they will be maintained | <ul style="list-style-type: none"> <li>▪ It is anticipated that wood stove replacement projects funded using the Fiscal Year 2018-2019 appropriation will reduce GHG emissions starting in 2020. The lifetime of a new wood stove or wood insert is estimated at 20 years. The lifetime of an electric, propane, or natural gas stove or insert is estimated at 13 years. The lifetime of a ductless min-split heat pump is estimated at 15 years.</li> <li>▪ With proper maintenance, the replacement devices will reduce GHG emissions for their entire lifespan.</li> <li>▪ Proper maintenance is especially critical for certified wood stoves and wood inserts in order to maximize efficiency and minimize pollution.</li> </ul> |
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**Element (4) A description of how the administering agency considered the applicability and feasibility of other non-greenhouse gas reduction objectives of Division 25.5 (commencing with Section 38500) of the Health and Safety Code.**

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| <input type="checkbox"/> Expected co-benefits, particularly environmental, economic, public health and safety, and climate resiliency | <ul style="list-style-type: none"> <li>▪ The most significant co-benefit of wood stove replacement projects is a reduction of up to 80 percent of fine particulate (PM<sub>2.5</sub>) emissions for each stove replaced with a certified stove<sup>6</sup> and almost 100 percent reduction for each stove replaced with a natural gas, propane, or electric home heating device.</li> <li>▪ Black carbon and air toxics emissions (including formaldehyde, benzene, and polycyclic organic matter) are also reduced along with PM<sub>2.5</sub> emissions.</li> <li>▪ Reductions in PM<sub>2.5</sub>, black carbon, and toxic air contaminants will reduce the impacts of climate change as well as improve both indoor and outdoor air quality. In some parts of the State, the PM<sub>2.5</sub> reduction co-benefit could have a significant impact on an area's ability to attain air quality standards.</li> <li>▪ Reductions in particle pollution will have significant short- and long-term health benefits. Short-term exposures to particles can aggravate lung disease, causing asthma attacks and acute bronchitis, and may also increase susceptibility to respiratory infections. Long-term exposures have been associated with reduced lung function and the</li> </ul> |
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<sup>6</sup> Overview of Proposed Updates to Air Emission Requirements for New Residential Wood Heaters: [https://www.epa.gov/sites/production/files/2013-12/documents/proposed\\_wood\\_heater\\_nsps\\_overview\\_fact\\_sheet\\_1.pdf](https://www.epa.gov/sites/production/files/2013-12/documents/proposed_wood_heater_nsps_overview_fact_sheet_1.pdf)

development of chronic bronchitis and even premature death.

- Consumers who will continue to use wood as fuel for home heating should be able to save approximately 20 percent of their annual fuel cost through the use of professionally installed, certified, high efficiency wood stoves or wood inserts.<sup>7</sup>
- Professional installers will remove old stoves, which often pose a serious fire risk, and ensure that newly installed home heating devices meet local fire and building codes and that residents have functional and reliable smoke and carbon monoxide detectors, thereby increasing public safety.
- Reductions in particulate matter will improve ambient air visibility.
- New home heating devices may increase the market value of a home.
- The change-out projects will support the local economy and job creation by increasing demand for, and installation of, certified wood stoves and other clean home heating devices.

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The Woodsmoke Reduction Program supports other AB 32 objectives in the following ways:

☐ How the project will support other AB 32 objectives

- Improves health of California residents by reducing pollution linked to short and long-term health issues such as asthma attacks, reduced lung function, and increased risk for cardiovascular disease.
- Complements the State's effort to improve air quality by helping the areas throughout the State to achieve and/or maintain attainment of air quality standards.
- Directs public and private investment toward the most disadvantaged communities in California by providing incentives for the replacement of old, inefficient wood burning devices.

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<sup>7</sup> Based on the difference in efficiency between uncertified stoves and certified stoves:  
<https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s10.pdf>



California Air Resources Board Expenditure Record for the Woodsmoke Reduction Program

<p>❑ Percentage of total funding that will be expended for projects that are located in and benefit priority populations<sup>8</sup> per CARB guidance</p>	<ul style="list-style-type: none"> <li>▪ The Investment Targets for Agencies Administering Fiscal Year 2018-2019 Funds<sup>9</sup> set a target of 75 percent of Woodsmoke Reduction Program funds benefitting low-income communities or households anywhere in the State.</li> <li>▪ The Investment Targets do not include a minimum target for Woodsmoke Reduction Program funds to benefit disadvantaged communities, but some projects may still benefit disadvantaged communities.<sup>10</sup></li> </ul>
<p>❑ Describe the benefits to priority populations per CARB guidance</p>	<ul style="list-style-type: none"> <li>▪ Change-outs will result in air quality improvements such as reductions in criteria and toxic air contaminants from reduced wood burning in low-income communities, low-income households, and possibly disadvantaged communities.</li> <li>▪ The Program may also result in employment and/or job training for priority populations.</li> <li>▪ Priority populations will be eligible for a higher incentive amount, up to the full cost of the purchase and installation of new home heating device and disposal of the old wood stove or wood insert.</li> <li>▪ To maximize benefits, the Program will focus outreach in disadvantaged and low-income communities.</li> </ul>
<p>❑ Explain strategies the administering agency will use to maximize benefits to disadvantaged communities</p>	<ul style="list-style-type: none"> <li>▪ Households in disadvantaged communities will qualify for higher incentives (Enhanced Incentives), up to the full cost of purchase and installation of new heating device and disposal of the old stove or insert.</li> <li>▪ Districts will establish their own processes for distributing funds considering the overall Program goal of directing funds to households in disadvantaged communities (along with other priority populations). Districts are encouraged to explore different options. Examples of two possible scenarios include:               <ul style="list-style-type: none"> <li>○ Conducting a District-wide solicitation during which all applications would be collected and reviewed and priority would be given to those Applicants qualifying for Enhanced Incentives.</li> <li>○ Implementing the Project in two phases. During the first phase, only applications from low-income households and households in disadvantaged and low-</li> </ul> </li> </ul>

<sup>8</sup> Priority populations include residents of: (1) census tracts identified as disadvantaged by California Environmental Protection Agency per SB 535; (2) census tracts identified as low-income per AB 1550; or (3) a low-income household per AB 1550. See Guidelines, Section VII.B, for more information on the definitions of priority populations.

<sup>9</sup> [https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/priority\\_targets\\_fy1819.pdf](https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/priority_targets_fy1819.pdf).

<sup>10</sup> CARB released updated Guidelines on August 30, 2018 (available at <https://www2.arb.ca.gov/resources/documents/ccf-funding-guidelines-administering-agencies>). These Guidelines are subject to change based on public input and Board direction. While the current Guidelines provide an indication of what is currently required, administering agencies must incorporate all provisions reflected in the current Guidelines and subsequent Board approved Guidelines.

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income communities would be accepted. During the second phase, the Project would be open to all Applicants.

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| <input type="checkbox"/> Explain how the administering agency will avoid potential substantial burdens to disadvantaged communities and low-income communities or, if unknown, explain the process for identifying and avoiding potential substantial burdens | <ul style="list-style-type: none"><li>▪ Participation in the Program is voluntary.</li><li>▪ In case of rental properties, both owner and tenant have to agree to participate in the Program. In order to qualify for an incentive, the owner has to agree to not raise the rent of the unit for a period of two years or evict the unit's residents because of increased value of the unit due solely to the newly installed home heating device.</li></ul> |
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**Element (5) A description of how the administering agency will document the result achieved from the expenditure to comply with Division 25.5 (commencing with Section 35800) of the Health and Safety Code.**

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| <input type="checkbox"/> How the administering agency will track/report progress to make sure projects are implemented per requirements in statute and CARB guidance | <ul style="list-style-type: none"><li>▪ Through its grant agreements, CARB will require the funding recipient (CAPCOA) and its partners (Districts) to maintain records and submit regular status reports.</li><li>▪ These reports will include the information required per reporting templates available on the CARB website.<sup>11</sup></li><li>▪ CARB will review the reports for compliance with Program goals and requirements.</li><li>▪ If a funding recipient does not perform in accordance with Program requirements, the recipient will be subject to the remedies for non-performance.</li><li>▪ If Program goals are not being met, CARB will collaborate with CAPCOA to implement Program adjustments as necessary to ensure that all Greenhouse Gas Reduction Fund (GGRF)/California Climate Investments requirements are met.</li></ul> |
| <input type="checkbox"/> Describe the approach that will be used to document GHG emission reductions and/or other benefits   | <ul style="list-style-type: none"><li>▪ Net GHG reductions from wood stove, wood insert, or fireplace replacement will be calculated using the CARB</li></ul>  |
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<sup>11</sup> <https://ww2.arb.ca.gov/resources/documents/cci-quantification-benefits-and-reporting-materials>.

before and after project completion.	<p>approved GHG Quantification Methodology for Fiscal Year 2018-19 available at: <a href="http://www.arb.ca.gov/cc-quantification">www.arb.ca.gov/cc-quantification</a>.</p> <ul style="list-style-type: none"> <li>Once operational, the administering agency will collect information on project outcomes for 25 percent of projects, consistent with CARB guidance.</li> </ul>
<input type="checkbox"/> Type of information that will be collected to document results, consistent with CARB guidance	<ul style="list-style-type: none"> <li>Program tracking number for each change-out</li> <li>Location of each change-out</li> <li>Criteria for determining if project benefits a disadvantaged community, low-income community, or low-income household</li> <li>Type of wood burning device being replaced (stove, insert, or fireplace)</li> <li>Quantity of wood burned annually before replacement</li> <li>Replacement device type and model</li> <li>Replacement device emission rates and efficiency (if available)</li> <li>Estimates of GHG, black carbon, and PM2.5 emission reductions</li> <li>Installation date</li> <li>Copy of final permit (City, County, or State)</li> <li>Incentive amount and, if applicable, verification that Applicant qualifies for an Enhanced Incentive based on the location of the property in a disadvantaged or low-income census tract or Applicant's household income</li> <li>Criteria for determining if project benefits a disadvantaged community, low-income community, or low-income household</li> <li>Verification of destruction of uncertified stove or fireplace and chimney being rendered permanently inoperable</li> <li>Verification that the resident was trained on device operation and maintenance and, if applicable, following best practices in wood storage and wood burning for residential space heating</li> <li>GGRF dollars spent</li> <li>Total project cost</li> <li>Information on jobs and job training opportunities created and whether employees are residents of disadvantaged communities, low-income communities, or low-income households</li> </ul>
<input type="checkbox"/> How the administering agency will report on program status	<ul style="list-style-type: none"> <li>CARB will provide regular updates on the Program, including expenditure amounts, GHG emission reductions, and other benefits, as applicable (e.g., stoves changed out) consistent with reporting templates available on the CARB website.<sup>12</sup> Reports will also include information on project outcomes for 25 percent of operational projects.</li> </ul>

<sup>12</sup> <https://ww2.arb.ca.gov/resources/documents/cc-quantification-benefits-and-reporting-materials>.

## California Air Resources Board Expenditure Record for the Woodsmoke Reduction Program