

GreenWrench Automotive Pollution Prevention

EPA Region 3

NEA #3: Automotive Manufacturing and Maintenance

US Environmental Protection Agency (EPA) Pollution Prevention Grant

Project Summary: This project will provide technical assistance (e.g., information, training, tools) to businesses to help them develop and adopt source reduction practices (also known as pollution prevention (P2)). P2 means reducing or eliminating pollutants from entering any waste stream or otherwise being released into the environment prior to recycling, treatment, or disposal. P2 practices can help businesses save money by reducing their resource use, expenditures, waste and liability costs, while at the same time reducing their environmental footprint and helping to protect human health and the environment. Specifically, this project will create a comprehensive pollution prevention (P2) education program to encourage source reduction at automotive maintenance businesses in the District of Columbia.

The priorities for P2 technical assistance (information, training, and tools) align with one or more of EPA's National Emphasis Areas (NEAs). Specifically, the project(s) will provide P2 technical assistance for the GreenWrench Program, training at technical schools, and support to help businesses adopt electric and hybrid vehicle maintenance practices. This project is a coordinated approach to influence practices that reduce or eliminate water, air, and solid waste pollution at auto body and repair businesses. This project will create an effective, unified message about how to reduce pollution through source reduction. The technical assistance conducted by the grantee will benefit facilities and, if applicable, may address underserved communities.

The grantee is expected to report on P2 performance measures (outputs and outcomes) and note who will benefit from the technical assistance as well as commit to following-up with facilities to find out whether the technical assistance was adopted and implemented. Specifically, the grantee anticipates providing reports that will include the raw data and an appropriate analysis of the data collected. This data will include pounds of hazardous materials and emissions reduced, gallons of water saved, metric tons of carbon dioxide equivalents reduced (MTCO_{2e}), and dollars saved by businesses through implementing P2 Business Management Practices. The report will also include an environmental justice component. The intended beneficiaries of the project are low-income underserved communities. DC DOEE's subaward grantee will provide expert technical assistance and education to auto repair businesses by developing a customized pollution prevention plan, providing training, and implementing P2 Business Management Plans. DC DOEE will also work with its technical assistance sub-grantee to select a business partner to pilot a charging infrastructure project. This program will help an automotive repair business utilize local incentives, which will assist with the buildout of needed charging infrastructure, attract businesses, and create a replicable model for other businesses. This effort will add 20 additional businesses, educate 150 additional students, while promoting sustainable energy, and support hybrid and electric vehicles.

Work Products Offered

Table 1. Summary of Activities, Outputs, and Outcomes

Activity	Outputs	Outcomes
<p>Technical Assistance</p>	<ol style="list-style-type: none"> 1. On-site visits provide technical assistance: <ol style="list-style-type: none"> a. existing partners continue involvement b. 20 new partners, at least 10 (50%) of facilities adjacent to EJ/underserved communities c. 15 facility-specific P2 Plans d. 120 on-site visits e. Remote technical assistance; 60 check-ins and on-demand assistance via phone or email 2. GreenWrench Guidebook and Template P2 Plan updated with a P2 “Lite” option 3. Outreach materials distributed: <ol style="list-style-type: none"> a. 500 outreach flyers b. 50 posters c. 175 chamois d. 500 pens e. 500 air pressure valves f. Safer product give-aways: Simple Green Degreaser, Krud Kutter, spill absorbent, vegetable based lubricants. 4. GreenWrench Toolbox Newsletter <ol style="list-style-type: none"> a. Twice-yearly newsletters posted online b. 1 section in each newsletter dedicated to covering EJ topics c. 200 newsletters mailed twice a year, or 400 total. 	<ul style="list-style-type: none"> - Staff at auto body and repair businesses know how to and regularly take action on minimizing pollution prevention through source reduction. - Partnering businesses reduce pollution with source reduction by addressing energy and water use, material use, on-site practices and control measures. - Partnering businesses become more energy efficient, resilient, and equipped to handle electric vehicles. - Quantifiable reductions in hazardous pounds reduced, MTCO₂e reduced, water gallons reduced, and dollars saved by implementing P2. At least 50% of the reductions are in EJ/underserved communities - Partnering businesses regularly ask for assistance with improving pollution prevention measures and addressing other pollution prevention issues that arise. - Auto body and repair businesses continue to take action and improve their P2 efforts with inspiration and knowledge gained in the newsletter. - District automotive repair businesses incorporate P2 BMPs as standard operating procedures.

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	<p>5. Environmental Workshops for Automotive Industry</p> <p>a. 2 workshops attended by at least 30 participants</p> <p>6. 3 case studies highlighting successful strategies employed at participating businesses</p> <p>7. Execute EV charging pilot with one partnering business</p>	<ul style="list-style-type: none"> - Auto body and repair businesses are informed about financing tools and incentives available to install solar and battery backup and EV charging stations. - Increased understanding of EJ concerns in underserved communities from businesses and students resulting from outreach materials, newsletters, and workshops - Replicable model for installing EV charging at auto repair businesses in the District
<p>GreenWrench Education</p>	<p>1. Additional course curriculum on EV maintenance and repair</p> <p>2. Conduct Workshops at Ballou High School</p> <p>a. 8 training sessions each lasting at least a month</p> <p>b. Up to 150 students reached, at least 75% live in EJ/underserved communities</p> <p>c. 300 completed surveys (2 per student)</p>	<ul style="list-style-type: none"> - Aspiring automotive repair technicians know which actions they can take to implement P2 BMPs, how to implement them, and why it is important. - District automotive repair businesses incorporate P2 BMPs as standard operating procedures. - Prepare aspiring mechanics to meet increasing demand for hybrid and EV repair and maintenance.
<p>EPA Reporting</p>	<p>1. Gather and analyze performance measures</p> <p>a. 8 quarterly reports from grantee with performance measures progress and data analysis</p> <p>2. Report on program progress to EPA</p> <p>a. 3 semi-annual reports and 1 final report</p> <p>b. Lessons learned are shared with other jurisdictions</p> <p>c. Up-to-date Environmental Justice Map</p>	<ul style="list-style-type: none"> - The environmental and fiscal impact of GreenWrench program is quantified and contributes to meeting goals in EPA's Strategic Plan. - Other organizations utilize lessons learned and resources developed by the Project. - DOEE meets the reporting requirements of the P2 Grant Program.

DOEE and Partner Roles

- A. **Technical assistance grantee:** During the first quarter of this Program, DOEE will award a grant to provide on-site technical assistance. The grantee will develop business-specific P2 Plans using the P2 Plan Template, and collect information during site visits on the practices adopted by the business. This data will be used to calculate pollution reductions and money saved by implementing P2 BMPs. This information will be provided to DOEE and used to create case studies to highlight P2 BMPs being implemented by partners. DOEE will provide workshops to businesses using an existing curriculum. The entity will summarize their work at the end of the grant period with a final report.
- B. **GreenWrench Education grantee:** During the first quarter of this Program, DOEE will award a grant to provide training to students that are studying to be mechanics in the District. The grantee will utilize an existing curriculum and evaluation form to educate and engage students in P2 BMPs. Data from the pre and post evaluation form will be used to measure knowledge retention and to improve the curriculum. The entity will summarize their work at the end of the grant period with a final report.
- C. **Auto body and repair businesses:** NAICS, 8111, Automotive Repair. DOEE will continue working with existing GreenWrench participants, expand outreach efforts to include additional businesses, and will focus outreach to small businesses. These partners will be engaged through a variety of means that include: online resources, mailings, in-person workshops, and on-site technical visits. The Program plans to target geographic clusters of businesses to make outreach more cost-effective and to promote social diffusion of P2 measures knowledge of the program. This Program will help partners develop long-term P2 Plans and set in place a revised P2 program that focuses on source reduction. An annual workshop and newsletter will continue to engage partners after the end of this Program.
- D. **Technical Schools:** NAICS, 611519, Other Technical and Trade Schools, Mechanic's Schools. There are several automotive technical programs within the District, including Excel Automotive Institute, the University of the District of Columbia's (UDC) Community College Division of Workforce Development, and Ballou Senior High School's Auto Technology Program. These technical schools look to provide District of Columbia residents with job skills training that enable them to pursue employment opportunities at little or no cost. The GreenWrench program currently partners with Ballou Senior High School to train cohorts of high school students. When the new EV curriculum is developed, GreenWrench will look to expand this partnership to additional schools. GreenWrench Education will allow for students to learn about environmental regulations and P2 BMPs that they can implement in their field of work. The goal of engaging these partners is to help shift the culture among automotive repair businesses to include P2 BMPs as standard operating procedures and to provide them with a strong skill set that will help make them more valuable to future employers. The new EV curriculum will also fill a void in local training opportunities to learn EV repair and maintenance.
- E. **Latino and Ethiopian auto body repair professionals:** DOEE will work to reach Latino and Ethiopian auto body and repair professionals with assistance from the DC Mayor's Office of Latino Affairs and the Office of African Affairs and with the help of bilingual staff, which will provide on-site technical assistance. The development of outreach materials in Spanish and Amharic will also support DOEE's outreach efforts and throughout the program.

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- F. **DOEE Steering Committee:** The DC Department of Energy and Environment will work closely with sub-grantees selected through a grant competition to support our project efforts and achieve our stated milestones. Moreover, an advisory committee composed of experts from within DOEE across topic areas. Each advisory committee member will spend an average of 1 to 2 hours per month, or 12-24 hours per year (24-48 hours during the course of 2 years) on this Program. To ensure the grant's overall success, the advisory committee members will:
- a. Attend quarterly meetings
 - b. Submit an explanation and photo on a subject related to a DOEE division's P2 expertise for a quarterly newsletter
 - c. Contribute to the outreach strategy for recruiting new partners and to identify channels with which to disseminate products developed by the program
 - d. Design and give division-specific P2 presentations for twice-yearly workshops and help coordinate the workshop