

# WVU POLLUTION PREVENTION NEWSLETTER

OCTOBER 2024

## INDUSTRY FOCUS: Cement and Concrete Product Manufacturing

Welcome to the latest edition of the WVU Pollution Prevention Newsletter! In this issue, we are excited to introduce the dedicated members of the WVU Pollution Prevention Team, committed to environmental stewardship. Explore valuable insights as we share industry best practices for enhancing energy efficiency and sustainability in cement and concrete product manufacturing facilities. You will also find P2 tips that can be implemented at home or in the workplace. Lastly, discover the range of services we offer to support Small and Medium-sized Enterprises and businesses throughout West Virginia. Stay informed, inspired, and engaged with our commitment to environmental excellence and community impact.

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# WHAT IS POLLUTION PREVENTION



**Pollution Prevention (P2)** is one of the key approaches towards an initiative to improve the energy efficiency and productivity of key industries while prioritizing environmental sustainability. The initiative focuses on reducing or preventing pollution at its source.

The primary objective of our Pollution Prevention program is to provide technical assistance to Small and Medium Enterprises in **key industries** and within **disadvantaged communities** in West Virginia by assisting with identification, development, and implementation of P2 methods. The recommendations provided to the industries are designed to help the business lower operational costs by reducing expenditures, water and energy usage, waste, and disposal costs, while at the same time maintaining and often improving productivity.

## **Key Industries:**

1. Food and Beverage Manufacturing and Processing
2. Chemical Manufacturing, Processing, and Formulation
3. Automotive Manufacturing and Maintenance
4. Aerospace Product and Parts Manufacturing and Maintenance
5. Metal Manufacturing and Fabrication

## OUR SERVICES

1. **Pollution Prevention Assessments:** The project team will make a planned visit to your facility to assess and gather data on energy, water, material, and personnel use. Assessment data along with input from the facility managers will be used to develop P2 recommendations. A detailed report based on the findings will be submitted to the facility shortly after the on-site assessment.
2. **Energy Audits/Assessments:** Applying for a USDA-REAP grant and need an assessment? Want to save money? The project team will visit your facility and identify opportunities to improve energy efficiency. A detailed report will be provided to the business, including estimates of implementation costs, energy use savings, energy cost savings, and simple payback period for each identified opportunity.
3. **Training Workshops:** Training workshops will be conducted to help businesses learn P2 Best Practices, tools, techniques, and resources available, and how to modify their process or site to improve energy efficiency, productivity, and environmental sustainability.
4. **Technical Assistance:** The project team can provide on-site or off-site technical assistance on a variety of industrial concerns related to topics including pollution prevention, energy efficiency, sustainability, environmental impact, and process improvement. Contact us for assistance!
5. **USDA-REAP Application Assistance:** Applying for grant funding can be a challenge, especially for the small businesses that do not have an expert at grant-writing on the payroll. Our project team can help you navigate the application process and assist with completing the application for USDA-REAP funding.

## P2 INDUSTRY FOCUS

### Tips for Cement and Concrete Product Manufacturing

- **Incorporate Supplementary Cementitious Materials (SCMs):** Replace a portion of traditional Portland cement with SCMs like fly ash, slag, or silica fume. These materials, often industrial by-products, can be used to enhance concrete properties while reducing the overall cement content. SCMs lower the carbon footprint of concrete production by reducing the demand for energy-intensive cement, while also improving durability and performance.
- **Alternative Fuel Sources:** Transition from fossil fuels to alternative fuels, such as biofuels or waste-derived fuels, in cement kilns to reduce greenhouse gas emissions and lower energy costs.
- **Recycling Concrete Waste:** Instead of sending demolished concrete to landfills, manufacturers can crush and recycle it into aggregates, which can then be used in new concrete production. This practice not only reduces waste but also minimizes the demand for virgin materials like sand and gravel.

## P2 @ WORK

### Improve Sustainability at Work

- **Switch to Green Web Hosting:** Migrate your company's website and data storage to a green web hosting service that uses renewable energy or offsets carbon emissions. This reduces the environmental impact of digital operations and supports the growth of renewable energy in the tech industry.
- **Implement Paperless Meetings:** Use digital platforms for meeting agendas, note-taking, and sharing resources, eliminating the need for printed materials. Encourage employees to use tablets or laptops for note-taking. Reducing paper use minimizes waste, lowers costs associated with printing and paper procurement, and promotes a more sustainable office culture.

## P2 @ HOME

### Make a Positive Impact at Home

- **Buy Locally Produced Foods:** Opting to purchase from local farmers' markets can help reduce pollution emissions associated with transporting goods from various locations to your nearby supermarkets. Additionally, the food can be healthier and fresher, and it will also support local agriculture.
- **Switch to Induction Cooking:** Replace conventional gas or electric stovetops with an induction cooktop, which uses electromagnetic fields to heat cookware directly and more efficiently. Induction cooking is faster and more energy-efficient, reducing overall energy consumption and eliminating indoor air pollutants released from burning gas.
- **Use Reusable Shopping Bags:** Buying and using reusable shopping bags will help to reduce the unnecessary use of polyethylene bags.

## HIGHLIGHTING OUR IMPACT

The WVU Pollution Prevention (P2) team takes great pride in the impact we have within the borders of West Virginia since January of 2023. From energy savings to CO<sub>2</sub> reduction, the recommendations we develop for these businesses not only help these businesses improve their sustainability, but also their bottom line!

Look at the impact of the opportunities we have found! →

**25** Energy Efficiency/P2 Assessments

**50** Recommendations

With Annual Savings of...

**\$504,637** in Energy Costs

**3,654 MWh** of Electricity

**11,897 MMBtu** of Natural Gas

**3,224 Metric Ton** CO<sub>2</sub> Equivalent

## UPCOMING EVENTS



**Webinar: P2 Series – Pollution Prevention Best Practices for the Food and Beverage Manufacturing Industry**

*November 29, 2024 - 12:00 to 1:00 PM (EDT)*

**Topic:** Explore Pollution Prevention opportunities for the Food and Beverage Manufacturing Industry with a focus on maintaining or improving profitability.

[Register Here](#) or use the QR Code!



**Webinar: P2 Series – Pollution Prevention Best Practices for the Chemical Manufacturing Industry**

*January 2025 - TBD*

**Topic:** Save money AND the environment with these Pollution Prevention Best Practices for the Chemical Manufacturing Industry.

[Register Here](#) or use the QR Code!



**Webinar: P2 Series – Pollution Prevention Best Practices for the Automotive Manufacture and Repair Industry**

*February 2025 - TBD*

**Topic:** Learn about opportunities to improve the sustainability and environmental compliance of Automotive Manufacture and Repair facilities while still maintaining profitability.

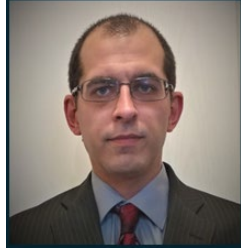
[Register Here](#) or use the QR Code!

# THE P2 TEAM

## Faculty & Staff



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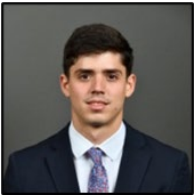


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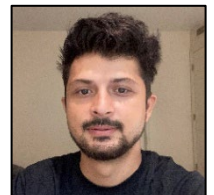
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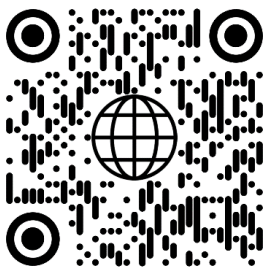
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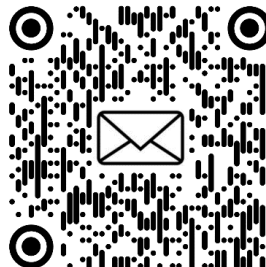
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P2 Website



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Questions or Comments?