



# Pollution prevention yields environmental, economic, societal benefits

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## Pollution Prevention

For more than 20 years, the Lab's Pollution Prevention (P2) Team has supported projects that invest in the elimination of the production of waste—also called source reduction.

“Pollution prevention tools include wastewater treatment, recycling, and using less toxic materials,” explains Terence Foecke, P2 program lead. “Source reduction is the pollution prevention tool that tries to completely eliminate the creation of a waste through changes in design, materials selection, and operations. Processes that are ‘right’ from the start are inherently safer and more efficient.”

In fiscal year 2016, the P2 Team provided funding to 17 projects totaling \$317,000. In addition to having an environmental benefit, funded projects typically also have economic and societal benefits that will last long after funding ends. For example, Green is Clean is a P2-funded project in which researchers test their waste to see if it is radioactive. This process assures that the waste gets disposed of properly, often in a less hazardous category. Green is Clean not only provides the environmental benefit associated with producing less radioactive waste but also eliminates the extra costs associated with disposing of radioactive waste.

Similarly, P2-funded research in green chemistry encouraged scientists to stop using hazardous chemicals such as nitric acid and instead use alternative, less dangerous chemicals in their research. This change was not only beneficial to the environment but also to Lab employees who are no longer exposed to such dangerous substances.

In 2016 the P2 Team also:

- Saved more than 32,000 liters of liquid nitrogen by replacing gas cylinders
- Recycled more than 1,000 tons of concrete and asphalt from construction sites
- Compiled the Hazardous Waste Minimization Report, investigating where the Lab is producing hazardous waste and how it could be reduced
  
- Hosted the P2 Awards to recognize Lab employees for their sustainability achievements. Forty-one projects and almost 300 employees were honored for their sustainability achievements. The projects saved an estimated \$3.2 million

- Continued to educate Lab employees and surrounding community about recycling
- Researched site-wide placement for

LED lighting

- Identified all uses of sulfur hexafluoride, a potent greenhouse gas, at the Laboratory and identified ways to decrease usage
- Conducted financial analyses of P2 funded projects
- Installed an on-site composter, which is currently processing bio-solid waste and will eventually also process food scraps and paper towels

The P2 Team looks forward to continue assisting the Lab achieve its mission in a more sustainable way.

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