



NIH Environmental Management System

Take Action to Protect the Future



NIH Labs Go Greener

Many of the diseases that we research at NIH have been shown to have an environmental component. As a result, NIH has a unique responsibility to carefully consider the environmental impacts of our day-to-day activities. NIH is a leader in environmental stewardship, but we can do even better. Each of us must take simple actions to minimize our environmental impacts.

What is the NEMS?

The NEMS is a management tool that helps us identify our most pressing environmental issues, set goals to address those issues, and improve our environmental performance. As a part of NEMS we are launching the NIH Goes Greener campaign to challenge all NIH employees and contractors to conduct their activities in a more environmentally sound manner.

Do my actions really make a difference?

Yes! Our cumulative actions will make NIH a leader in environmental stewardship. Thanks to your efforts, NIH has achieved:

- A 99% reduction in the generation of mixed (radioactive chemical) wastes compared to the mid-1990s.
- The elimination of unnecessary uses of mercury at NIH facilities through our "Mad as a Hatter Campaign."
- The participation of 5,300 employees in the Transshare Program.
- A recycling rate of approximately 50%. That means that 25,000 pounds of waste per day is *not* burned in the Montgomery County waste incinerator or buried in local landfills.

How can I become involved in the NEMS?

- Join the NIH Greenserve where employees can post environmental ideas and questions. Visit <https://list.nih.gov/archives/greenserve-l.html> to join.
- Visit www.nems.nih.gov.
- Join the NEMS Sustainable Lab Practices Working Group (Email: green@mail.nih.gov).
- Do you have a tip or information that will help the environment and can make NIH Go Greener? Send it to green@mail.nih.gov.

For more information,
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www.nems.nih.gov





What can I do to make my lab greener?

Use available guidance and tools to educate yourself on how to conduct your activities with less environmental impact.

Here are some tips on what you can do to minimize your impact on the environment.

Minimizing/Substituting Chemicals

- ✓ Purchase chemicals in smallest quantities needed - disposal costs for excess chemicals often exceed the original purchase price
- ✓ Order chemicals in reusable/returnable containers
- ✓ Use less toxic alternative chemicals, such as less toxic lab stains or solvent substitutes
- ✓ Reduce use and disposal of radioactive materials by using non-radioactive alternatives, materials with lower activities, or short-lived radionuclides
- ✓ Replace your mercury-containing equipment with non-mercury substitutes
(<http://nomercury.nih.gov>)
- ✓ Design your experiments to use the minimum amount of chemicals possible
- ✓ When researching a new or alternative procedure, consider the amount of waste produced as a factor
- ✓ Share your techniques for minimizing wastes with colleagues

Pollution Prevention and Water Conservation

- ✓ Store chemicals properly and use secondary containment to contain leaks or spills
- ✓ Ensure wastes types are disposed of in separate, proper containers
(<http://orf.od.nih.gov/Environmental+Protection/Waste+Disposal/>)
- ✓ Keep containers of chemicals closed at all times
- ✓ Do not dispose of chemicals down the drain
- ✓ Keep containers labeled to avoid costly analysis required to identify wastes for disposal
- ✓ Recirculate water in cooling water systems
- ✓ Identify and have leaking faucets fixed – For a maintenance request call 301-435-8000
(Or fill out an online maintenance request at <http://orf2.od.nih.gov/58000/WRnewX.asp>)
- ✓ Use backflow prevention devices to protect potable water from contamination

Energy Savings

- ✓ Turn off lights when not in use and use natural lighting when possible
- ✓ Turn off computers and office equipment at the end of every workday
- ✓ Unplug equipment (e.g., vacuum pumps, heating and cooling equipment) when not in use
- ✓ Purchase Energy Star[®] equipment and enable energy savings features where possible

More Information

- ✓ Labs21[®] - Laboratories for the 21st Century
(<http://www.epa.gov/lab21.gov/>)
- ✓ Less is Better – A Guide to Minimizing Waste in the Laboratory
(http://membership.acs.org/c/ccs/pubs/less_is_better.pdf)
- ✓ American Chemical Society's (ACS's) Green Chemistry Institute
(<http://www.chemistry.org/portal/a/c/s/1/acsdisplay.html?DOC=greenchemistryinstitute%5Cindex.html>)
- ✓ Massachusetts Institute of Technology's (MIT's) List of Green Chemical Alternatives
(<http://web.mit.edu/environment/academic/alternatives.html>)
- ✓ Carnegie Mellon's Institute for Green Oxidation Chemistry
<http://www.chem.cmu.edu/groups/Collins/resource/index.html>)

