

2021 NIH Green Labs Program

The 2021 NIH Green Labs Program is comprised of 39 multiple choice statements. Please select your response for each statement based on the current practices in your lab using these options: “Yes: We do this” or “No: We do not do this” or “NA: not applicable.”

There are three levels of Green Lab Certification: Bronze, Silver, and Gold.

Bronze Level: Labs that reply “Yes” to at least 10 statements will receive the Bronze Level Green Lab Certificate.

Silver Level: Labs that reply “Yes” to at least 15 statements will receive the Silver Level Green Lab Certificate.

Gold Level: Labs that reply “Yes” to at least 25 statements will receive the Gold Level Green Lab Certificate.

Waste Management

The Waste Management Program provides comprehensive recycling services plus chemical, medical, radioactive, and general (solid) waste services to the NIH. Key goals of the Waste Management Program are to reduce waste generation, to increase recycling, and to properly dispose of all waste types. For additional information, please visit the [Waste Management](#) site.

1. We manage waste per [NIH Policy Manual – 3032 Environmental Management and Waste Minimization](#) and follow guidelines stated in the [Waste Disposal Guide](#) to collect and dispose of the waste generated in our lab.
 - Yes
 - No
 - NA
2. We procure, use, and dispose of items and materials containing elemental mercury and mercury compounds, as stated in the [NIH Policy Manual – 3033 Procurement, Use, and Disposal of Mercury and its compounds.](#)
 - Yes
 - No
 - NA
3. As a waste generator, we conduct routine checks of chemical waste, solid waste, and medical pathological waste in the laboratory per the ORF Division of Environmental Protection, [2021 Laboratory Chemical Waste Inspection Checklist](#) similar to typical questions asked during a federal or state inspection.
 - Yes
 - No
 - NA
4. Before disposing of any liquid in the laboratory sink, we review the pre-approved list of chemicals in the [NIH Drain Disposal Guide](#) and if unclear/uncertain we fill out the

[Application for Disposal of Specific Chemical Reagents to the Sanitary Sewer](#) in order to obtain approval for safe disposal.

- Yes
- No
- NA

Chemical Waste

Chemical waste includes non-radioactive chemical solids or liquids contaminated with hazardous chemicals. For guidance on chemical waste management, please visit the [Chemical Waste](#) site. The NIH Chemical Waste Management program provides many opportunities for chemical waste reduction through [various recycling programs](#).

5. We generate the following chemical wastes in our lab. Check all that apply.
 - Batteries
 - Empty chemical bottles
 - Chemical solvents (e.g., ethanol, xylene, formalin, histo-clear)
 - Silver from x-ray films, cassettes, and recovery units
 - Other, please specify [*Insert text box*]

6. We acquire chemical waste containers designed specifically for collecting and disposing of alkaline [batteries](#), [empty chemical bottles](#), liquid chemical waste, and chemically contaminated gels through the NIH Chemical Waste Services (contact at 301-496-4710).
 - Yes
 - No
 - NA

7. We complete the [chemical waste tag](#) including the hazard class pictogram selection in its entirety in order to properly dispose of liquid chemical waste. For more information on the new chemical waste tag, please watch this [video](#) and contact Division of Environmental Protection with any questions at 301-496-3537.
 - Yes
 - No
 - NA

8. We participate in the Surplus Chemical Redistribution Program to distribute sealed, unused, and unexpired chemicals (with proper labels and no sign of chemical or physical change) through [NIH FreeStuff](#).
 - Yes
 - No
 - NA

9. We participate in the [NIH Solvent Recovery Program](#) to have chemical solvents purified for our re-use.

- Yes
- No
- NA

Medical Pathological Waste:

Medical pathological waste (MPW) includes any waste with actual or perceived presence of pathogenic agents. This type of waste is generated through various animal and human studies and treatment protocols. Some MPW can be decontaminated and then disposed of as general waste. For more information, visit the [Medical Pathological Waste](#) site.

10. Please indicate which types of MPW are generated in your lab.

- Waste containing or contaminated with infectious or pathogenic agent(s).
- Pathological waste including animal carcasses, anatomical waste (organs, tissue from humans or animals)
- Sharps containers (scalpels, razor blades, Pasteur pipettes, pipette tips, needles and syringes).
- Animal bedding contaminated with pathogenic agents which cannot be decontaminated through autoclaving.
- Any material potentially contaminated with cytotoxic drug(s): Empty cytotoxic drug vials, cytotoxic drug dispensing apparatus, patient care materials, towels, absorbent material, or similar materials.

11. We label MPW as “Special Handling” if it could contain the COVID-19 virus to alert the medical waste disposal staff.

- Yes
- No
- NA

12. When using MPW boxes, we firmly fold down the flaps of the MPW boxes before placing two plastic bags (one inside the other) and secure the bag tops fitted over the flaps. For more information, please review [packaging procedures](#) in the Waste Disposal Guide.

- Yes
- No
- NA

13. We do not overfill our MPW boxes. A filled box should not weigh more than 40 pounds or be more than $\frac{3}{4}$ full.

- Yes
- No
- NA

14. For packaging MPW waste, we first tie/seal each plastic bag separately in the MPW box, then close the box, and provide our building and room number, the type of waste (pathological or non-pathological) as a label on top of the box.

- Yes
- No
- NA

General Waste

General waste consists of materials free of any apparent pathological/infectious, radioactive or hazardous chemical contamination. For more information, visit the [General Waste](#) site.

15. We generate the following solid waste in our lab. Check all that apply:

- Soft plastics (e.g., grocery bags, Ziploc bags, air shipping pillows, bubble wrap).
- Pipette tip racks
- Toner and ink cartridges
- Cardboard
- Mixed paper products
- Electronics
- Equipment
- Appliances
- Furniture
- Other, please specify [Insert text box]

16. We [recycle](#) soft plastics (e.g., grocery bags, Ziploc bags, air shipping pillows, bubble wrap). Please call Ecology Services, Inc. at (301) 402-6349 for more information.

- Yes
- No
- NA

17. We [recycle](#) pipette tip racks, mixed paper products and ink and toner cartridges.

- Yes
- No
- NA

18. We surplus government-owned personal property, accountable and non-accountable properties for reutilization and recycling through our IC Property Custodial Officer (PCO) or [Property Accountability Officer \(PAO\)](#). This includes items such as office equipment, appliances, electronics, etc. For more information, please refer to the [Personal Property Management Guide](#).

- Yes

- No
- NA

19. We recycle cardboard boxes. The best practice is to flatten the box and place next to the general recycling bins in the hallway or cardboard bins at the loading dock.

- Yes
- No
- NA

20. In accordance with the COVID-19 protocol, we properly discard face coverings (N95, surgical, cloth, and any other disposable masks) and gloves into [designated step cans](#) on campus.

- Yes
- No
- NA

Energy Conservation

The NIH Energy Conservation program seeks to minimize energy consumption through energy use policies, best available technologies, proficient operations, and maintenance activities. For more information, please visit the [Energy Conservation](#) site.

21. We use the following equipment/appliances in our lab. Check all that apply:

- Biosafety cabinets
- Autoclaves
- Ovens
- Orbital shakers
- Centrifuges
- Heat blocks
- Water bath
- Other, please specify [Insert text box]

22. We have purchase lab equipment/appliances that are energy-efficient products, such as [Energy Star appliances and instrumentation](#) or Federal Energy Management Program ([FEMP](#)) [designated products](#) per the [Federal Acquisition Regulations](#).

- Yes
- No
- NA

Freezer Management

[NIH Manual Chapter 26101-16](#) details how to manage ultra-low temperature (ULT) freezers at the NIH to increase freezer reliability and decrease energy consumption. Please click on

the [video](#) to learn how to perform a user level preventative maintenance. For more information, visit the [Freezer Management](#) site.

23. We manage all ULT freezers per [NIH Policy Manual Chapter 26101-16](#).

- Yes
- No
- NA

24. We participate in the [NIH Freezer Challenge](#).

- Yes
- No
- NA

25. We report freezer failures in the [NIH Freezer Failure Database](#).

- Yes
- No
- NA

26. We request a loaner freezer(s) by filling out the [DSEIS Work Request form](#) or calling at (301) 496-4131 when needed.

- Yes
- No
- NA

Water Conservation

The NIH Water Conservation program seeks to optimize water consumption through water usage policies, best available technologies, operations and maintenance. For additional information, visit the [Water Conservation](#) site.

27. We follow the NIH guidance for maintaining [wet lab photoprocessing units](#) (dark rooms) in accordance with the Washington Suburban Sanitary Commission (WSSC) and USEPA regulations.

- Yes
- No
- NA

28. We have adopted best management practices in our lab to conserve water. Check all that apply:

- Close the autoclave door after removing items to prevent loss of heat and steam.
- Condense autoclave loads.
- Turn off water baths when not in use.

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- Request building maintenance staff to repair leaks and malfunctioning faucets and machines. For a routine maintenance service request, please call 301-435-8000.
- Plan a small-scale experiment first to optimize resources, such as water and media.
- Other, please specify: [Insert text box]

Green Chemistry:

The USEPA defines green chemistry as the design of chemical products and processes that reduce or eliminate the generation of hazardous substances. Please visit the [USEPA Green Chemistry](#) site to learn more about the basics of green chemistry.

29. We incorporate the [12 Design Principles of Green Chemistry](#) when planning experiments.
- Yes
 - No
 - NA
30. We encourage our laboratory vendors to obtain My Green Lab's [ACT](#) label for laboratory products. Please contact [My Green Lab](#) for more information.
- Yes
 - No
 - NA
31. We keep an updated chemical inventory and refer to this list before purchasing an item.
- Yes
 - No
 - NA
32. We check the [NIH FreeStuff](#) website and review the inventory list, which is circulated regularly by the [Lab Manager's](#) and [Greenserv](#) listserves.
- Yes
 - No
 - NA
33. We participate in the NIH Intramural Research Program, [Collaborative Research Exchange](#) (CREx) to utilize core facilities and shared resources.
- Yes
 - No
 - NA

Communication and Outreach

Communication and outreach are essential to the successful implementation of environmental programs at the NIH. This ensures the largest audience can be reached and provides the largest

environmental impact. To learn more about the communication and outreach opportunities at the NIH, please visit the [Outreach](#) site.

34. We volunteer/participate/represent our IC at the [sustainability meetings](#). A few such meetings are the Sustainable Laboratory Practices Working Group (SLPWG), Sustainability Management Team (SMT), Green Team Leads Council Meeting (GTLC), and many more. Please email at green@mail.nih.gov to participate in these meetings.
- Yes
 - No
 - NA
35. We support the SLPWG and the GTLC groups by volunteering at outreach events. A few such volunteer opportunities include Earth Day, Safety, Health, and Wellness Day, the Green Labs Fair, and America Recycles Day. Click on the [Outreach](#) link to learn about the next upcoming event.
- Yes
 - No
 - NA
36. We subscribe to the [NIH Green Zone Newsletter](#) to stay informed about NIH environmental programs.
- Yes
 - No
 - NA
37. We collaborate with NIH staff outside of our IC or with outside organizations to promote sustainable lab practices.
- Yes
 - No
 - NA
38. We have motivated an NIH colleague from another lab to participate in the 2021 [NIH Green Labs Program](#). For example, at the Lab Managers Meeting, IC Safety Committee Meeting, and/or IC Fellows Committee Meeting, etc.
- Yes
 - No
 - NA
39. We have completed the [NIH Environmental Management System](#) (NEMS) Awareness Training, which is designed to inform NIH staff of their roles and responsibilities within NEMS.
- Yes
 - No
 - NA