

## 2023 NIH Green Labs Program for labs in Ft. Detrick and Advanced Technology Research Facility, Maryland

The 2023 NIH Green Labs Program for labs located in Ft. Detrick campus and Advanced Technology Research Facility, Maryland, is comprised of 27 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.

Green Lab Certification Levels	Minimum requirement to achieve the Green Labs Program Certificate
Bronze Level	Labs must reply “Yes” to at least 6 statements
Silver Level	Labs must reply “Yes” to at least 15 statements
Gold Level	Labs must reply “Yes” to at least 20 statements

### Waste Management

The Waste Management group in EHS, provides waste disposal of chemical, biohazardous, and general (solid) waste and recycling services. Key goals of the Waste Management Program are to reduce waste generation, increase recycling, and ensure proper disposal of all waste types.

1. We follow the guidelines stated in [Waste Management](#) section of the EHS website located on the NCI at Frederick Staff site 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. Before disposing of any liquid in the laboratory sink, we review the [What Can Go Down The Drain](#) section of the EHS Waste Management website.
  - Yes
  - No
  - NA

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**Chemical Waste Management**

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 Chemical Waste Management program provides many opportunities for chemical waste reduction through [various recycling programs](#).

4. We collect alkaline batteries, empty chemical bottles, liquid chemical waste, and chemically-contaminated gels in the appropriate waste containers, and dispose of them through the [EHS Waste Management](#) group.
  - Yes
  - No
  - NA
  
5. We ensure that the [Hazardous Waste Tag](#) is completed to dispose of liquid chemical waste. Please check the boxes that indicate your lab's practice in filling out the items on the NCI at Frederick Hazardous Waste tag. For more information or questions, please contact the EHS Waste Management (301) 846-5718.
  - Contact information: Name, Building number, Room number, Department, Project #
  - Print/write clearly the satellite accumulation start date.
  - Circle one or more hazard symbols/pictograms to identify the hazard (flammable, corrosive, toxic)
  - Identify and list the chemical constituents accumulated in the container
  - Yes, we complete the above listed information
  - No
  - NA
  
6. We contact the Waste Management group with any questions at (301) 846-5718 to ensure the correct hazard pictograms are identified on the [Hazardous Waste Tag](#).
  - Yes
  - No
  - NA
  
7. We participate in the [NCI at Frederick Surplus Chemical Redistribution Program](#) to distribute sealed, unused, and unexpired chemicals (with proper labels and no signs of chemical or physical change). Please contact the Waste Management group with any questions at (301) 846-5718.
  - Yes
  - No
  - NA

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**Biohazardous Waste Management**

Biohazardous waste includes any waste with actual or perceived presence of pathogenic agents. Pathological waste includes animal carcasses, anatomical waste such as organs, tissue from humans or animals. In addition, sharps containers (scalpels, razor blades, Pasteur pipettes, pipette tips, needles, and syringes), animal bedding contaminated with pathogenic agents which cannot be decontaminated through autoclaving, and other material potentially contaminated with cytotoxic or cytostatic drug. For more information, visit the [Biohazardous Waste](#) site.

8. When setting up the Biohazardous Waste box for collecting waste, we firmly fold down the flaps of the Biohazardous Waste box before we place a plastic and secure the bag tops by fitting them over the flaps. For more information, please review the [packaging procedures](#).
  - Yes
  - No
  - NA
  
9. We do not overfill our Biohazardous Waste boxes. A filled box should not weigh more than 20 pounds.
  - Yes
  - No
  - NA
  
10. After the Biohazardous Waste box is filled, we prepare it for disposal by following the [packaging procedures](#) as stated below. Please check the box to indicate your lab's practices:
  - Turn box over and tape the bottom of the box on all seams with a minimum of 2 inches wide, moisture resistant tape. Two (2) strips for the center seam and 1 strip for each of the side seams. Turn box upright and insert a red bag. Pull bag gently over the sides. After the bag is full, twist the top of the bag.
  - Double over the top of the bag and cinch or wrap tightly with tape, securing the opening. **DO NOT PUSH BAG INTO THE BOX WITH HANDS!!!**
  - Carefully close the flaps. Waste will be pushed down by the flaps.
  - Tape and securely seal the top of the box with at least 4 strips of 2-inch-wide moisture resistant tape (2 strips for the center seam. 1 strip for each side of the seams).
  - Use the [Biohazardous Waste Box Pick-up Request MS Form](#) to request a pick-up.
  - Yes, we follow the packaging procedures as listed above.
  - No
  - NA

**General Waste Management**

General waste consists of materials free of any apparent pathological/infectious, radioactive, or

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hazardous chemical contamination. Materials considered as soft plastics are the grocery bags, Ziploc bags, air shipping pillows, all clean, dry bags, pallet/shrink wrap, and bubble wrap. Other general (solid) waste items are pipette tip racks, toner and ink cartridges, cardboard, mixed paper products, furniture, electronics, equipment, and appliances. For more information, visit the [General Waste](#) site.

11. We collect pipette tip racks, mixed paper products, and ink/ toner cartridges for [recycling](#) at designated areas. For more information on acquiring recycling bins for these items or locating the designated collection areas in your building, please contact the Division of Environmental Protection at (301) 496-7990.
  - Yes
  - No
  - NA
  
12. We surplus government-owned personal property, through our Contracts & Acquisitions Property group. For more information, please refer to the [Relocation/Transfer of Property site](#).
  - Yes
  - No
  - NA
  
13. We recycle cardboard boxes by flattening the boxes and placing them next in recycling bins or in the cardboard collection bins located outside buildings.
  - Yes
  - No
  - NA

### Freezer Management

[NIH Manual Chapter 26101-16](#) establishes the NIH policy for the selection, inventory, placement, and maintenance of Ultra-Low Temperature Freezers (ULTF), Laboratory Grade Freezers (LGF) and Laboratory Grade Refrigerators (LGR) to increase freezer and refrigerator reliability and reduce energy consumption, operating costs, and greenhouse gas (GHG) emissions. For more information, visit the [Freezer Management](#) site.

14. We manage ULT and Laboratory Grade freezers and refrigerators per [NIH Manual Chapter 26101-16](#) as listed below.
  - Conduct preventative maintenance semiannually. Please review the [video for details on](#) performing a user-level preventative maintenance.
  - Ensure freezers and refrigerators are placed in areas with at least 6 inches of clear space around the sides and on top.
  - Register freezers and refrigerators into the NIH Business System
  - Yes, all listed actions apply to our freezer and refrigerator management.

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- No, one or more of the listed actions are not reflective of our lab's practices.
- NA

15. We participated in the 2023 [NIH Freezer Challenge](#) to practice environmental stewardship above and beyond the requirements in the [NIH Manual Chapter 26101-16](#).

- Yes
- No
- NA

16. We operate ULT freezers capable of maintaining temperatures between -60°C and -90°C at -70° C or warmer.

- Yes
- No
- NA

**Water Conservation**

The NIH Water Conservation program seeks to minimize water consumption through water usage policies, best available technologies, and operations and maintenance activities.

17. We have adopted best management practices such as planning small scale experiments, closing autoclave door after removing items to prevent loss of heat and steam; condensing autoclave loads; turning off water baths when not in use; and requesting building maintenance staff by calling the FME Trouble Desk at (301) 846-1068 to repair leaks and malfunctioning faucets and machines.

- Yes
- No
- NA

18. We prevent inadvertent leakage of silver metal from wet lab photo processing units (dark rooms) by installing a silver recovery unit/EPAN chamber placed in a secondary container.

- Yes
- No
- NA

**Sustainable Procurement:**

The Biden Administration released the [Executive Order 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability](#) that outlines a coordinated, whole-of-government approach, along with individual agency goals and actions, to transform Federal procurement and operations to reduce greenhouse gas (GHG) emissions and environmental impacts and secure a transition to clean energy and sustainable technologies. A few sustainable procurement and operational practices are listed below:

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19. We review the [Sustainable Marketplace: Greener Products and Services website](#) and [Significant New Alternatives Policy \(SNAP\) program](#) to identify green products/services and to determine acceptable chemical substitutes for ozone-depleting substances, respectively, before purchasing items to be used in our laboratories.

- Yes
- No
- NA

20. We purchase energy-efficient products (appliances, equipment, and instrumentation) certified by [ENERGY STAR](#) and energy and water efficient products designated by DOE Federal Energy Management Program ([FEMP](#)) per the [Federal Acquisition Regulations](#).

- Yes
- No
- NA

21. We keep an updated chemical inventory and refer to this list before purchasing an item.

- Yes
- No
- NA

22. We subscribe to the [NEEDED-AVAILABLE@list.nih.gov](mailto:NEEDED-AVAILABLE@list.nih.gov) and we search the [Surplus Chemicals Inventory](#) website, or contact Waste Management at [NCIChemWaste@mail.nih.gov](mailto:NCIChemWaste@mail.nih.gov) for an updated list of available surplus lab equipment/supplies before purchasing any lab-related product.

- Yes
- No
- NA

23. 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 NCI at Frederick and the Frederick National Laboratory for Cancer Research (FNLCR).

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24. We volunteer, participate, and represent our program/lab at the [FNL Green Team meetings](#). Please email at [FNLGreenTeam@mail.nih.gov](mailto:FNLGreenTeam@mail.nih.gov) to participate.

- Yes
- No

25. We volunteer at environmental outreach events to increase our knowledge and to help and educate the FNL research community about environmental programs. A few such volunteer opportunities include Earth Day, World Water Day, Take Your Child to Work Day and the Spring Research Festival plant swap.

- Yes
- No

26. We [subscribe](#) to the monthly [NIH Green Zone Newsletter](#) to stay informed about NIH environmental programs. The NIH Green Zone Newsletter includes 3 articles in each monthly issue, typically a Featured Article, a Take Action article and a Staff Spotlight or Event article.

- Yes
- No

27. We complete the [NIH Environmental Management System](#) (NEMS) Awareness Training annually, which informs NIH staff of their roles and responsibilities within NEMS.

- Yes
- No

28. We have motivated our peers/colleagues from another lab to participate in the NIH Green Labs Program. Please provide the name of your peers/colleagues in the box below.

Thank you for participating in the 2023 NIH Green Labs Program for Ft. Detrick Campus.

**Open ended questions (optional):**

A. How did you hear about the NIH Green Labs Program?

- Meeting or working group (please provide name in the text box below)
- Principal Investigator or Scientific Director (please provide name and IC in the text box below)
- Colleague (please provide name and IC in the text box below)
- NIH Green Labs Fair
- NIH Intranet site
- NIH Green Zone Newsletter
- Green listserv
- NIH Twitter (X)
- Other: [Insert text box]

B. Are you experiencing any challenge while managing chemical waste, especially filling out the

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Hazardous Waste Tag?

- C. Are you interested in learning about the biohazardous waste management packaging procedures?
- D. Do you maintain a wet lab photo processing unit/dark room? If so, then please specify the building and room number of the wet lab unit?
- E. Any suggestions for improving the NIH Green Labs Program self-assessment form for Ft. Detrick?