2024 NIH Green Labs Program

Bethesda Campus and other location

The 2024 Green Labs Program for labs located on Bethesda Campus and NIH locations, not covered in other location specific program for this year, is comprised of 36 multiple choice statements. You can skip a statement or statements or an entire section if that is not applicable to your lab. Please select the appropriate response to reflect the current practices in your labs. You will have the option to select multiple answer choices by checking the applicable boxes or selecting a "Yes: We do this" or "No: We do not do this" or "NA: not applicable" as one of the answer options. There are no negative points for selecting No or NA.

After reading the Green Lab Self-Assessment statements, if you become aware and recognize that you are willing to participate in an environmental initiative, please respond "Yes," as your commitment in doing this moving forward. For instance, if you have not subscribed to the NIH Green Zone Newsletter, you can sign up and then respond "Yes," before filling the Green Lab Assessment.

There are four levels of Green Lab Certification: Honorary mention, Bronze, Silver, and Gold.

Green Lab Certification Levels	**Minimum requirement to achieve the Green Labs Program Certificate**
Honorary Mention	Labs must reply "Yes" to at least 5 statements
Bronze Level	Labs must reply "Yes" to at least 10 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 ORF Division of Environmental Protection (DEP), Waste and Resource Recovery Branch (WRRB), provides chemical waste, Medical Pathological waste (MPW), and general (solid) waste disposal 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. Provided below are multiple-choice statements on wastes generated and managed in lab/offices. Please kindly read carefully and select the response(s) to accurately reflect the practices in your lab/offices.

1. We have joined the WRRB Outreach Channel on Microsoft Teams, to learn about the waste management programs and training opportunities, to request for chemical waste pick-up through online services, and other tools on waste management at NIH.
    a. Yes

b. No
c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
d. N/A

2. We follow the guidance from NIH Policy Manual – 3033 Procurement, Use, and Disposal of Mercury and its compounds if ever procuring, using, and disposing of items and materials containing elemental mercury and mercury compounds.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov.
    d. N/A

General Waste Management

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

3. We dispose of the following solid waste(s) generated in our lab/office in the appropriate solid waste recycling bins for pick up. Select all that apply:
    a. Any Empty Reagent Bottles
    b. PBS/Media Plastic Bottles
    c. Pipette Tip Racks
    d. Toner Cartridges
    e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    f. NA

4. Our lab/office recognizes the following items as acceptable for disposal in the Disposable Labware & Broken Glass boxes per the NIH Waste Disposal Guide. Select all that apply:
    a. Non-recyclable uncontaminated labware
    b. Decontaminated labware
    c. Labware packaging
    d. Contaminated glassware
    e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    f. N/A

5. We have reviewed the NIH Waste Management Services FAQ and consequently, do not use teal containers or have contacted chemical waste services at (301) 496-4710 or the ORF/DEP at (301) 496-7990 to have any teal containers removed from service.

a. Yes
b. No
c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
d. N/A

6. We recycle soft plastics (e.g., grocery bags, Ziploc bags, air shipping pillows, bubble wrap) by placing them in designated Plastic Film Collection Boxes. A list of soft plastic collection locations on the Bethesda campus is provided here. For requesting plastic film collection boxes, please contact the ORF/DEP at (301) 496-7990.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

7. 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, and electronics. For more information, please refer to the Personal Property Management Guide.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

8. We participate in the NIH Styrofoam take-back program. Please contact the Division of Environmental Protection at (301) 496-7990 for more information.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

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 NIH Chemical Waste Management program provides many opportunities for chemical waste reduction through various recycling programs.

9. We have displayed the Chemical Waste Compliance Poster and NIH Waste Disposal Guide 2022 in our lab/office to assist with the identification and management of waste in accordance with the environmental regulations.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

10. Our lab is aware that chemical waste containers must not be placed in hallways or other public locations per the NIH Waste Disposal Guide 2022.

- Yes
- No
- I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
- N/A

11. Our lab is aware that the chemical waste containers must not be transported across the hallway to another location for storage per the NIH Waste Disposal Guide 2022.

- Yes
- No
- I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
- N/A

12. Our lab discharges chemical waste into the sanitary sewer per the NIH Drain Discharge Guide only under a few specific conditions as indicated below. Select all that apply.
    a. When all chemical constituents and concentrations of the waste generated can be found in Appendix B of the NIH Drain Discharge Guide.
    b. When an approved and unexpired drain discharge application through ORF/DEP is on the file that is not listed in Appendix B of the NIH Drain Discharge Guide, then the chemical waste can be discharged into the sanitary sewer.
    c. When the sales representative or direct contact with the manufacturer of the laboratory chemicals explained that the product or influent waste is safe for discharge based on the Safety Data Sheet (SDS).
    d. When the approved drain discharge application on the file has expired, it is acceptable to discharge the chemical waste covered by that application.
    e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    f. N/A

13. We recognize that it is the responsibility of NIH staff to ensure the proper disposal of chemical waste generated from activities as indicated in the NIH Drain Discharge Guide.
    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

14. We complete the NIH Chemical Waste Tag (NSN-7530-00-L07-5985) in its entirety to accurately identify the chemical waste generated in the lab from the moment the chemical waste is placed in the waste container.

    a. Yes
    b. No
    c. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    d. N/A

15. When completing the NIH Chemical Waste Tag for our lab's waste, we select the following hazard category pictograms to indicate that it is a hazardous waste. Select all that apply:
    a. Flammable
    b. Corrosive
    c. Reactive
    d. Oxidizer
    e. Toxic
    f. Environmental Hazard
    g. Explosive
    h. Dangerous
    i. Health Hazard
    j. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    k. N/A

16. We recognize the environmental benefits of chemical waste recycling and actively participate in the following recycling programs. Select all that apply:
    a. Batteries
    b. Empty Chemical Bottles
    c. Solvents with High BTU
    d. Used Oil
    e. Lead
    f. Scrap Metals
    g. Fluorescent & HID Lamps, Mercury (Elemental & Debris)
    h. Silver Recovery Units & Cassettes
    i. Empty Steel & Plastic Drums
    j. Surplus Chemical Redistribution
    k. Solvent Recovery
    l. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    m. N/A

Medical Pathological Waste Management

Medical pathological waste (MPW) encompasses any waste with actual or perceived presence of pathogenic agents. MPW also includes pathological materials such as animal carcasses, anatomical waste, organs, and tissues from humans or animals. In addition, MPW includes sharps along with animal bedding or other materials contaminated with cytotoxic or cytostatic drugs which cannot be decontaminated through autoclaving. For more information, visit the Medical Pathological Waste site and review packaging procedures in the Waste Disposal Guide.

17. Our lab avoids contaminating Medical Pathological Waste (MPW) with the following items, as indicated in the NIH Waste Disposal Guide (select all that apply):
    a. Radioisotopes
    b. Cytotoxic or Cytostatic drugs

c. Hazardous chemicals
d. Infectious or pathogenic agent(s)
e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
f. N/A

18. Per the NIH Waste Disposal Guide, our laboratory classifies the following material as "Sharps."
    a. Needles
    b. Syringes
    c. Scalpel/razor blades
    d. Microfine pipette tips
    e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    f. N/A

19. Per the NIH Waste Disposal Guide, our laboratory adheres to the following waste management procedures for sharps containers:
    a. Place intact needles and syringes in the sharps' container.
    b. Any sharps' container is acceptable.
    c. Do not compress or pack down materials in container.
    d. Discard sharp containers in an MPW box.
    e. I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    f. N/A

Energy Conservation

The NIH Energy Conservation program seeks to optimize energy consumption through best available technologies, operations, and maintenance activities. For more information, please click here to learn ways for improving energy efficiency in labs.

One particularly impactful opportunity for labs/offices is to turn off, place in standby, or sleep equipment when it's not in use or on nights and weekends. For statements 21-22, select all the equipment/appliances in your lab where this was the case *prior* to the 2024 NIH Green Labs Program (before September 30, 2024) versus *during* the NIH Green Labs Program (after September 30, 2024).

20. Select all the equipment and appliances from the list below that were turned off or were set to be on standby/sleep mode, when not in use, prior to September 30, 2024. Check all that apply.

- Autoclaves
- Ovens
- Incubators
- Orbital shakers
- Centrifuges
- Heating blocks

- Water bath
- Microscopes
- Cell counters
- Imagers
- Rotators/Rockers
- Computers or laptops that run the equipment (SPE's)
- Film developers
- Copiers
- Printers for lab equipment
- NA

21. Select all the equipment and appliances in your lab from the list below that will be turned off or programmed to be on sleep mode or standby mode when not in use during this year's Green Labs Self-assessment (i.e., after September 30, 2024). Check all that apply.

    - Autoclaves
    - Ovens
    - Incubators
    - Orbital shakers
    - Centrifuges
    - Heating blocks
    - Water bath
    - Microscopes
    - Cell counters
    - Imagers
    - Rotators/Rockers
    - Computers or laptops that run the equipment (SPE's)
    - Film developers
    - Copiers
    - Printers for lab equipment
    - NA

22. We are interested in learning about making our research more energy efficient.
    - Yes
    - No
    - NA

23. Explain other practices in your labs to make your research energy efficient.

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.

24. We have adopted best management practices in our lab/offices to conserve water. Check all that apply:
    - Close the autoclave door after removing items to prevent loss of heat and steam.
    - Condense autoclave loads.
    - 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]

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.

25. We manage the ULT and laboratory grade freezers and refrigerators per NIH Manual Chapter 26101-16 as listed below.
    a. Conduct preventative maintenance bi-annually.
    b. Ensure freezers and refrigerators are placed in areas with at least 6 inches of clear space around the sides and on top.
    c. Register freezers and refrigerators into the NIH Business System

    - Yes, all listed actions apply to our freezer and refrigerator management.
    - No, one or more of the listed actions are not reflective of our lab's practices.
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - N/A

26. We participated in the 2024 NIH Freezer Challenge to practice environmental stewardship above and beyond the requirements in the NIH Manual Chapter 26101-16.

    - Yes
    - No
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - N/A

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

    - Yes
    - No
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - N/A

Sustainable Procurement:

The Biden-Harris Administration released Executive Order 14057: *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability* which establishes 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:

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

    - Yes
    - No
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - NA

29. 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
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - NA

30. We keep an updated chemical inventory and refer to this list before purchasing new items.

    - Yes
    - No
    - NA

31. We search the NIH FreeStuff website when procuring items for free including scientific equipment, lab supplies, office equipment and supplies, copy machines, printers, computers, and furniture before making any new purchase.

    - Yes
    - No
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - NA

32. We participate in the NIH Intramural Research Program, Collaborative Research Exchange (CREx), to utilize core facilities and shared resources.

    - Yes
    - No
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - NA

Communication and Outreach

Communication and outreach are essential to the successful implementation of environmental programs at the NIH. To learn more about the communication and outreach opportunities, please click here.

33. We participate and represent our Institutes/Centers (ICs) at sustainability meetings/working groups to promote environmental sustainability at NIH: A few such meeting/working groups are:

    Green Team Leads Council Meeting (GTLC) –Members include the NIH Institutes/Centers (ICs) Green Team leads or representatives who are involved with increasing awareness and encouraging green and sustainable practices in office spaces.

    Sustainable Laboratory Practices Working Group (SLPWG) – This group serves the NIH intramural lab community and welcomes lab staff from all ICs to influence their peers/colleagues in embracing and advancing lab sustainability at NIH.

    Sustainability Management Team (SMT) – The team comprises of NIH senior leadership who participate in high-level discussions for strategizing, implementing, and promoting environmental sustainability across NIH.

    Please email at green@mail.nih.gov to learn more about participating in meetings/working groups and receive a point for participation.

    - Yes
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - No

34. 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.

**Response should reflect subscription status of the lab POC/applicant and/or Principal Investigator/Core Facility Manager of lab*

- Yes
- I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
- No

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

    - Yes
    - I do not know, and I am interested in learning about it. Email:green@mail.nih.gov
    - No

36. 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.

    Insert name from the directory

The following questions are optional and will not count toward your 2024 NIH GLP score/Certification Level. Your responses are extremely valuable to ensure good customer service. Thank you in advance!

A. Any suggestions for improving the NIH Green Labs Program self-assessment form, especially including a topic or environmental program area to improve sustainability in your lab or at NIH?
B. 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]

Thank you for participating in the 2024 NIH Green Labs Program.