Laboratory Disposal

Sierra Cheri

OD/ORF/DEP

NIH Recycling Mission

- The NIH Recycling Program is committed to the delivery of effective, courteous, innovative, and responsive recycling services to the NIH. We serve to establish a supportive and informational role to coordinate recycling at all NIH installations in cooperation with local, state, and federal agencies. The program integrates the principles of recycling and waste reduction into all phases of daily activities and operations.

- **Before throwing items in the trash, please stop to consider if it is recyclable.**

- Zero Waste is a whole system approach which reduces consumption and ensures that products are made to be reused, repaired, or recycled back into nature or the marketplace.

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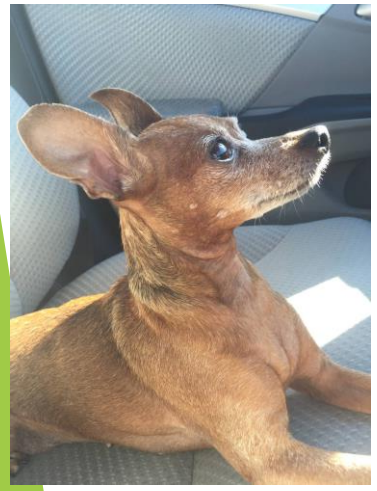
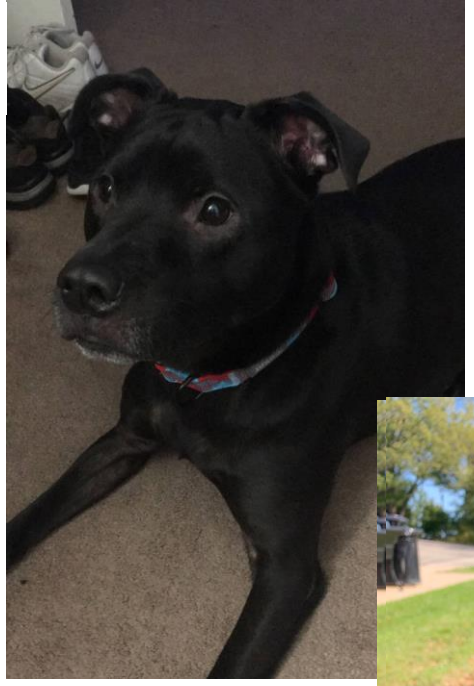
Meet WRRB's new Recycling Coordinator

- Bachelor's in Environmental Science
- Studied at Robert Morris University
- Pitbull, Greyhound and Whippet Owner
- Passions; Animals, Drawing and Environmental Topics





Styrofoam Take Back Program

- Running August – December 31st 2021
  - ELOG has provided a 30 ft. pup trailer at the 10B2 south dock for the accumulation and transportation of Styrofoam generated at the main campus.
  - ESI (NIH Solid Waste Contractor) has established a pick-up schedule to service each building on a routine basis.
    - If a storage bin does not exist in your building, please contact Sierra Cheri to request a storage bin.
  - This material will be transported and delivered to ELOG's processing facility where the material will be offloaded and densified for re-use.

Restrictions

- Styrofoam Cooler Restrictions Include:
  - Styrofoam coolers which must be white pigment only, free from labels and packaging materials.
  - The cooler waste must not have any medical or residual materials, including ice packs.
  - To maximize space, please place smaller coolers into larger coolers.

The Future

- Please be advised that this program is only an interim solution and will end on December 31, 2021
- This will be the last time Styrofoam Cooler recycling will be provided by NIH.
- Some alternative options can be pursued by working with your vendor(s) directly for a take back program or ordering an alternative cooler that is not made of Styrofoam.
  - Examples of alternative Styrofoam Coolers that are offered:
    - Igloo Recool Coolers (made from a mix of paraffin wax and recycled tree pulp, biodegradable, reusable, can hold up to 75 lbs)
    - Vericool Ohana Coolers (made from recycled plant fiber, it is reusable, compostable, recyclable, and available in different sizes)
    - Pelican Elite Coolers (made from polyethylene plastic, features for extreme water tightness and ice retention, includes drain plug and hose attachment, guaranteed for life)
- Please be aware that DEP/WRRB are not endorsing the above vendors; however, we are providing them as examples of alternatives to Styrofoam coolers.

Point of Contact

- Sierra Cheri
  - sierra.cheri@nih.gov
  - (240) 917-0576.
- Mansi Metha
  - mansi.metha@nih.gov
  - (240) 461-2246
- If you have any questions or concerns or need help throughout the Styrofoam Take Back Programs run, please let myself or Mansi know!

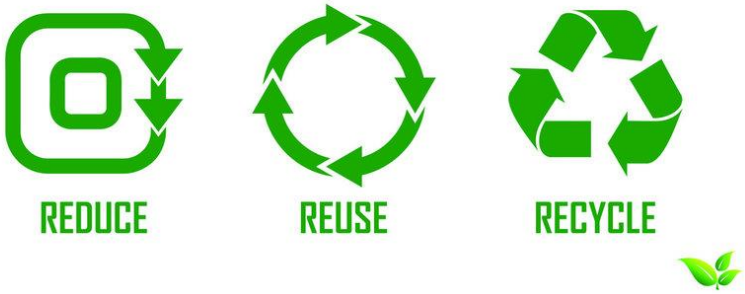
MOST GENERAL WASTE CAN BE RECYCLED!

Recyclable

- Pipette Tip Racks
- Plastic #5
- Electronics*
- All Batteries
- Commingled Recycling
- Printer and Toner Cartridges
- Wooden Pallets
- Cardboard

Non-Recyclable

- Decontaminated media or labware
- Pyrex glass labware, polystyrene, glass slides, window or sheet glass
- Styrofoam or any polystyrene type materials
  - Exception: Take Back Program
- Material contaminated with food products, infectious material, hazardous chemicals, radioactive materials or empty containers previously containing infectious material, hazardous chemicals, or radioactive materials



Laboratory Pickup

- In addition to the previous guidance, laboratory recycling pickup service will remain as is for labs with the following changes:
  - To help minimize risk, recycling staff will be available to pick up lab recyclables on call only. The recycling staff will contact the requestor to schedule the pickup time and the requestor must wear a face covering and maintain social distancing when the pickup occurs.
  - If a container is full, please call the Office of Research Facilities, Division of Environmental Protection (DEP) at 301-496-7990 or ESI at 301-402-6349 or email mansi.mehta@nih.gov to submit your pickup request.

Waste Management Procedures

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Disposable Labware and Broken Glass Box

Glass/Plastic Labware

- Place non-recyclable uncontaminated or decontaminated labware in the Disposable Labware & Broken Glass box
- Glassware/labware that cannot readily be chemically decontaminated should be autoclaved prior to disposal as general waste
- NIH Waste Disposal Guide, Version 1.0

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Pipette

- What is standard recycling bin that collects them?
  - Tall metal burgundy bin labeled: PIPETTE TIP RACKS
  - Typically located in hallways or near elevators
- They should be decontaminated, clean and empty.
  - The pipette tip racks are shredded and then shipped out to a processor to be melted into black pellets. The pellets are then shipped to a processor to make flowerpots.
- Call 301-402-6349 to request additional containers.

Batteries

- All types of batteries: Lead-acid, alkaline, lithium batteries, and rechargeable are collected.
- Uninterruptible Power Source (UPS) batteries must be removed from the UPS casing prior to pick-up.
- For battery removal service call Division of Scientific Equipment and Instrumentation Services (DSEIS) at 301-496-4131.
- Call 301-496-4710 for collection.
  - Collected by chemical waste contractor.

Lead Acid and Gel Batteries

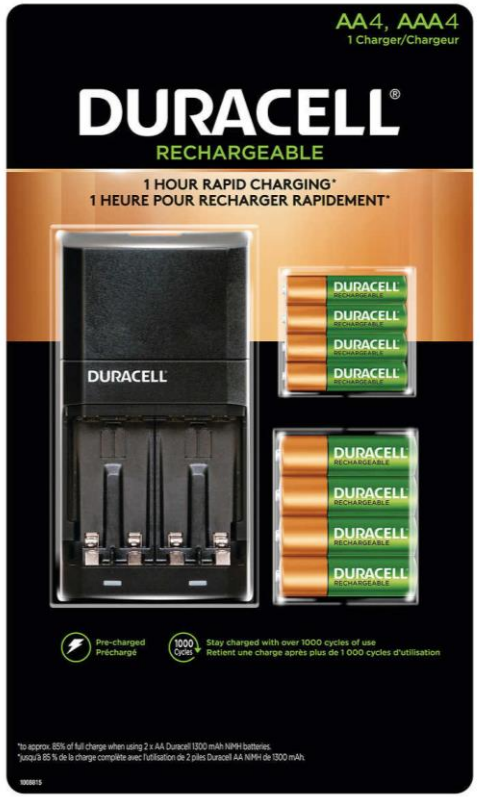
- Collection Process
  - Lead-acid and gel-batteries are collected and placed on wooden pallets for accumulation during storage.
  - Their terminals are concealed with electrical or duct tape to avoid electrical discharge on contact with other terminals which can result to sparks that can start a fire.
  - The full pallets are shrink wrapped and secured with bands to keep them intact during transportation to a permitted recycling facility.
- Beneficial Reuse
  - Lead Acid batteries are broken apart in the recycling process and the lead, plastic and acid are separated.
  - The lead is melted, poured into ingots and delivered to battery plants to be used in new batteries, bullets and lead bricks for radioactive material shielding.
  - The plastic is melted and made into new battery cases, toys and other parts, while the acid is reuse or neutralized and discharged.

Alkaline Batteries

- Collection Process
- Alkaline batteries are collected in translucent plastic containers which are available from the CWS.
- The full containers are collected by the CWS upon request for service.
- Batteries are consolidated into bigger drums that are shipped for recycling.

- Beneficial Reuse
  - Alkaline batteries are fully recycled and used to produce various types of products.
  - This includes:
    - New alkaline batteries, carbon wire, jewelry, shotgun casings, plastic bottles, and numerous consumer items

Rechargeable Batteries



- Collection Process
  - Rechargeable batteries like nickel-cadmium (ni-cads), nickel metal hydride, lithium, etc.
  - They are individually bagged and placed in a DOT shipping container for recycle processing at an approve facility.
  - Nickel Cadmium batteries are processed in a metal recovery furnace. The reclaimed cadmium is used in the production of new nickel cadmium batteries for cell phones, drills, computers, cameras, PDAs, toys and games. It is also used as a corrosion resistant coating.
  - The reclaimed nickel is use in the manufacture of stainless-steel products like sink parts, faucets, furniture, switch plates, and wires.

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Wooden Pallets

- Discarded wooden pallets, regardless of condition.
- Transported to Valleywood where pallets in good condition are resold, while damaged pallets are repaired for resale.
- Collected by recycling contractor from loading docks daily.
- Call (301) 496-7990 for collection from the loading docks.

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Cardboard

- Flatten cardboard and place them next to general recycling bins or on loading docks in cardboard recycling racks.
- Cardboards are transported to Georgetown Paper Stock where it is baled and shipped to a paper mill to make new fiberboard boxes for variety of uses.

Animal Bedding

- Animal bedding makes up approximately 12% of our solid waste stream at the National Institutes of Health. Preference should be given to biodegradable and eco-friendly animal bedding that is safe for the animals. According to The National Institutes of Health, Laboratory Animal Allergy Prevention Program, corncob, recycled wood product (paper), and wood chip bedding are the primary bedding materials used at the NIH. Due to hypoallergenic properties, corncob bedding and recycled wood products are preferred for allergy prevention.

- Contaminated bedding should be disposed of as chemical, radioactive, or medical waste, based on the contaminant. Uncontaminated animal bedding can be disposed of as general waste. Uncontaminated bedding could potentially be composted or used as landscape mulch. Composting uncontaminated animal bedding is a goal of the Division of Environmental Protection.

Disposable Face Coverings

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Place Surgical Masks, N95, Non-Serviceable Face Coverings and Gloves into this Container

Call DEP: 301-496-7990 or ESI: 301-402-6349 For Service

- Disposable face coverings that are worn in the laboratory should be disposed of as Medical Pathological Waste (MPW). As an alternative, laboratory staff may choose to dispose of face coverings in the general trash.
- If disposable face coverings are worn in lieu of cloth masks by the NIH public to comply with NIH Safety Guidance for return to the physical workplace, these coverings should be discarded into trash cans or properly identified step cans. Step cans will be placed at the exit doors of heavily occupied buildings, parking garages and parking lots. Please discard face coverings and other protective items responsibly in trash receptacles and not on the ground.

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Disposable Face Coverings Additional Information

- Please note that the guidance provided above is to assist with collection of disposable face coverings and to reduce contamination to our recycling stream. In addition to disposable face coverings, please only place non-serviceable cloth masks and gloves into these step cans.
- Please visit the following link to view step can locations on the NIH Bethesda campus: https://go.usa.gov/xwgDB. To reduce the risk to staff and waste handlers, do not fill the containers more than ¾ full.
- For further questions, please contact Mansi Mehta at mansi.mehtata@nih.gov or 240-461-2246.

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Chemical Surplus Program

- The NIH Surplus Chemical Redistribution Program is based on the concept of using and purchasing chemicals as efficiently as possible. Through this program, NIH staff can post surplus chemicals on the NIH FreeStuff website (initially started by NIAID) to be claimed for free by other staff members. The chemicals must be sealed, unused and unexpired.
- The NIH Surplus Chemical Redistribution Program processes requests from all 27 Institutes and Centers and will deliver to all campuses in the D.C./Baltimore metropolitan area. If you are interested in posting a surplus reagent or browsing the list of available chemicals, please visit the NIH FreeStuff website. Click on the “Chemicals & Reagents” button to view the current inventory or click on the “Post” button next to it to post your own chemical surplus items.
- Please contact Crispin Hernandez at crispin.hernandez@nih.gov for any questions or interest in joining this program.

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Solvent Recovery Program

- The NIH Solvent Recovery Program provides free purified solvents to NIH labs that have been recycled from used solvents.
- Through this program, an NIH lab can have ethanol, formalin, acetone and xylene distilled from their used solvents and returned in a purified form.
- These solvents are purified using a distillation process followed by quality assurance and quality control testing methods. The returned solvents are of high purity; labs have reported no differences between these recovered solvents and commercial products
- Please contact Crispin Hernandez at crispin.hernandez@nih.gov or call 301-496-7990 to inquire about participating in the NIH Solvent Recovery Program

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Old Tyvek Disposal Program

- **NOTE: This is currently not an active program**
  - Used DuPont™ Tyvek® suits, aprons, sleeves, boot covers, and lab coats. Do not include suits deemed hazardous in accordance with DOT or EPA.
  - Place in large clear plastics bag on loading dock.
  - Collected by recycling contractor.
- Future recycling for Tyvek suits is currently being looked at
- Current process- Tyvek suits are thrown away

Current NIH Disposal Guides

- NEMS: http://nems.nih.gov/aspects/waste/programs/recycling.cfm
- ORF: https://ors.od.nih.gov/sr/dohs/Documents/NIH%20Waste%20Disposal%20Guide.pdf
- For Chemical Reduction Strategies Go To: http://nems.nih.gov
- For Information on Waste Tags: https://ors.od.nih.gov/sr/dohs/Documents/NIH%20Waste%20Disposal%20Guide.pdf
- NIH Chemical Waste Service Recycling Program: https://nems.nih.gov/programs/WM/Documents/NIH_Chemical_Waste_Recycling_Poster.pdf

Contact Information

National Institutes of Health
Office of Management

- Recycling Waste Pickup: 301-402-6349
- General Waste Pickup: 301-496-7990
- General Waste Management and/or Recycling Questions: 301-496-7990
- Chemical Waste Pickup: 301-496-4710