

The Waste Management Hierarchy

In our previous issue, we wrote about the 2021 America Recycles Day event. This annual occurrence promotes recycling to decrease the amount of waste we produce and to reuse resources. However, recycling is only part of the solution for reducing waste generation. The NIH utilizes the Waste Management Hierarchy (described by [NIH Policy 3032](#)) to determine the most preferred solutions for waste management. For this strategy, recycling should come into play after we have prioritized source reduction and reuse.



The Waste Management Hierarchy from the EPA.¹

Source reduction calls for the prevention or reduction of waste whenever possible at the source. For example, purchasing a large amount of a chemical solely for a test experiment is likely to result in excess waste. By contrast, purchasing an item that is frequently used in bulk can reduce packaging waste. Source reduction has many strategies, but the overall concept is to only purchase items that you are confident you will use!

Reuse contributes to source reduction by eliminating or reducing the need for new items. When reusing an item is feasible, that item replaces one or more additional items that would have been acquired and disposed. Reusing an item even a single time can cut waste generation in half!

As shown in the pyramid image above, source reduction and reuse should build the foundation of our waste management strategy. Once this is considered, recycling and composting is the next most preferred option, followed by energy recovery and then treatment and disposal as a final option. Below are a few options for source reduction and reusing items at the NIH! Please refer to the NEMS website (www.nems.nih.gov) to learn more about waste management procedures at the NIH.

- [NIH Free Stuff](#) – The NIH Free Stuff Program offers a variety of items to all NIH staff for free! These items are no longer wanted by the owner but are still in a good enough condition to be used by others at the NIH. Items range from lab equipment (refrigerators, incubators) and office furniture (desks, bookshelves) to office supplies (staplers, hole punchers) and computer items (monitors, laptops). Before purchasing a new item, please browse the NIH Free Stuff site to see if there are any items available for free for you to use instead! You can also post items you no longer want on the site for others to claim.
- NIH Surplus Chemical Redistribution Program – This program is a subset of the NIH Free Stuff program, specializing in unopened and unexpired chemicals. Utilizing free chemicals helps to save money and reduces chemical waste disposal, which is more costly than non-hazardous

waste disposal. You can view or post chemicals on the [NIH Free Stuff webpage](#), or sign up for the Greenserve listserv (GREENSERVE-L@list.nih.gov) to receive monthly updates on the available chemicals.

- Lab Operations Contact List Listserv – This listserv regularly sends notifications to its lab members about items available for free on a first-come, first-serve basis. Whenever a member has an item they no longer need, instead of disposing of the item, they will send a quick email to the group to see if anyone else can use it. To join a listserv, you must first create an account using your NIH email at <https://list.nih.gov/>. Then, search for the Lab Operations Contact List (LOCL-L@list.nih.gov) among the Listserv archives. Once on this page, simply click “Subscribe” to gain access to the listserv.
- NIH Styrofoam Take Back Program – This program returns Styrofoam shipping materials to be reused for additional shipping purposes. Styrofoam has a very low density, which makes it difficult to find cost-effective methods to ship the material to recycling facilities. Through the end of June 2022, this program will allow Styrofoam to be collected on the Bethesda campus to be reused. Collection bins are available for each building on the Bethesda campus. Please contact DEP (301-496-7990) to request a collection bin or to learn where a bin is already located.
- [NIH Solvent Recovery Program](#) – The NIH Solvent Recovery Program provides NIH staff a method for purifying spent solvents from their lab for reuse. Current procedures allow for ethanol, formalin, xylene and acetone to be recovered and returned to participating labs. The recovered solvents have a high purity, with participating labs reporting no differences between these solvents and commercial products. Please contact [Crispin Hernandez](#) to participate in this program.