



NIH RECYCLING PROGRAM

LCDR Mark Marshall, USPHS
Recycling Coordinator
301 496-7990(O) 301 526-2452(C)
E-mail: marshallma@mail.nih.gov



*To Protect the Future, Take
Action Into Your Hands*



ENVIRONMENTAL POLICY NATIONAL INSTITUTES OF HEALTH

As the steward of medical and behavioral research for the Nation, the National Institutes of Health (NIH) leads the way in the pursuit of knowledge about living systems and the application of that knowledge to extend healthy life and to reduce illness and disability. In support of this goal, the NIH is committed to the protection of the environment and to the responsible use of natural resources. As proactive stewards of the environment and public health, the NIH community embraces pollution prevention and sustainable development while continually seeking to reduce resource consumption.

Specifically, the NIH is committed to:

- Complying with all Federal, State, and local environmental laws and regulations, as well as Executive Orders.
- Preventing pollution by minimizing the generation of wastes where possible, reducing and recycling materials, and, where necessary, disposing of wastes in an environmentally responsible manner.
- Integrating environmental and health considerations into decision-making processes through the implementation of the NIH Environmental Management System (EMS).
- Continual improvement of the EMS to better our environmental performance by setting environmental goals, measuring progress, taking corrective action when necessary, and communicating the results to NIH management and staff.

All employees of NIH are responsible for being aware of the environmental and health impacts of their jobs and for continually striving to minimize these impacts as set forth in this policy. We will review this policy annually and update it as necessary.



Elias A. Zerhouni, M.D.
Director
National Institutes of Health

11/13/05
Date

NIH Recycling Program

Recycling Defined

- The process of collecting, sorting, cleaning, treating and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new products.
- The collection and often reprocessing of discarded materials for reuse.

NIH Recycling Program

Why Recycle at NIH?

• LEGAL REQUIREMENTS

Montgomery County Executive Regulation 15-04 AM

- Requires that **ALL** businesses and employees recycle mixed paper, cardboard, commingled materials, and scrap metal. In other words, it is illegal to dispose of these items with the solid waste. Violations of this regulation can result in fines of up to \$150 per day per offense.

Executive Order 13423-Strengthening Federal Environmental, Energy, and Transportation Management

- Under 13423 and the related implementing instructions, *waste prevention and recycling must be* incorporated into agency operations, and disposal is viewed as a last resort. Specifically, Section 2(e) of the E.O. requires agencies to increase diversion of solid waste and maintain cost-effective waste prevention and recycling programs in its facilities.

NIH Recycling Program

Why Recycle at NIH?

• ECONOMIC BENEFITS

- Reduced Waste Disposal Fees
- Generate Revenue from Recyclable Materials
- Proceeds Benefit NIH Charities
- Reduces the use of Natural Resources by Reusing the Recycled Materials
- Creates Jobs



NIH Recycling Program

Why Recycle at NIH?

•Reduced Waste Disposal Fees

- An increase of 10% to the current recycling rate will save an estimated \$51,000 a year in solid waste disposal costs
- An increase of 35% to the current recycling rate will save an estimated \$178,000 a year in solid waste disposal costs
- An increase of 50% to the current recycling rate will save an estimated \$255,000 a year in solid waste disposal costs

NIH Recycling Program

Why Recycle at NIH?

•Generate Revenue from Recyclable Materials

•In an average month NIH receives the following for the value of recyclables:

- Cardboard - \$4500
- Mixed Paper - \$1500
- Scrap Metal - \$2500
- Wood Pallets - \$1300

* For an average year this equates to nearly \$120,000 for the value of these recyclables

NIH Recycling Program

Why Recycle at NIH?

• Proceeds Benefit NIH Charities

- For every usable inkjet or toner cartridge that is recycled, a donation is made to NIH Charities for \$1. In 2007, almost \$3500 was donated from this effort and so far to date over \$2000 has been donated for 2008.

- A charitable donation is also made on behalf of Garment Recovery Systems (GRS) for the recycling of Tyveks garments. A recent donation from GRS in the amount of \$280 was made to the Children's Inn.

• NIH Charities Include:

- The Children's Inn at NIH
- Special Love for Children with Cancer-Camp Fantastic
- Friends of the Clinical Center

NIH Recycling Program

Why Recycle at NIH?

• Reduces the use of Natural Resources by Reusing the Recycled Materials

- 94% of the natural resources America uses are non-renewable (up from 59% in 1900 and 88% in 1945).
- Recycling saves these non-renewable resources. For example, with active paper recycling, 20% more wood will need to be harvested by 2010 to keep up with demand. Without recycling, 80% more wood would need to be harvested.
- It takes 95% less energy to recycle aluminum than it does to make it from raw materials. Making recycled steel saves 60%, recycled newspaper 40%, recycled plastics 70%, and recycled glass 40%.
- Using scrap steel instead of virgin ore to make new steel takes 40% less water and creates 97% less mining waste.

NIH Recycling Program

Why Recycle at NIH?

•Creates Jobs

- Incinerating 10,000 tons of waste creates 1 job, while landfilling the same amount creates 6 jobs and recycling the same 10,000 tons creates 36 jobs.
- The National Recycling Coalition reports that recycling has created 1.1 million jobs, \$236 billion in gross annual sales, and \$37 billion in annual payroll.
- In California, meeting the state's 50% recycling goal is expected to create about 45,000 recycling jobs, over 20,000 of which are slated to be in the manufacturing sector.
- Massachusetts employs more than 9,000 people in more than 200 recycling enterprises. About half of these jobs are in the recycling-based manufacturing sector. These businesses represent more than half a billion dollars in value added to the state's economy.

NIH Recycling Program

What Can Be Recycled at NIH?

• MIXED PAPER (MANDATORY IN MONTGOMERY COUNTY)

- White or Colored Office Paper
- Shredded Paper
- Newspaper
- Telephone Directories
- Paper and Hardback Books
- Magazines
- Document Binders/Three Ring Binders
- Scientific Journals
- Catalogs
- Post It Notes
- Envelopes
- Manila Folders
- Tissue and Paper Towel Boxes
- All Other Paperboard Type Boxes (For example, frozen meal packaging)



NIH Recycling Program

What Can Be Recycled at NIH?

•COMMINGLED (MANDATORY IN MONTGOMERY COUNTY)

- Aluminum Cans and Tin Foil
- Steel and Tin Cans
- All Plastic Bottles, Cups, and Containers (#1,2,3,4,5, 6 (Non-Styrofoam), and 7 plastic resin codes)
- Yogurt Containers (Rinsed)
- Prescription Bottles
- Glass Bottles and Jars/No Pyrex
- Food Storage Containers
- Grocery, Retail, Sandwich, and Other Miscellaneous Plastic Bags
- Plastic Utensils (Clean)
- Buffer and Saline Bottles

NIH Recycling Program

What Can Be Recycled at NIH?

- **CARDBOARD (MANDATORY IN MONTGOMERY COUNTY)**
 - Corrugated cardboard (packaging materials removed)
- **YARD WASTE (MANDATORY IN MONTGOMERY COUNTY)**
 - Grass, leaves, branches, brush, etc..
- **SCRAP METAL (MANDATORY IN MONTGOMERY COUNTY)**
 - Both ferrous and non-ferrous metals collected

NIH Recycling Program

What Can Be Recycled at NIH?

•THESE ITEMS ARE VOLUNTARILY RECYCLED AT NIH

- Pipette Tip Racks
- Wooden Pallets
- Construction Debris
- Toner/Printer Cartridges-Benefits NIH Charities
- Tyveks-Benefits NIH Charities
- Batteries
- Fluorescent Tubes
- Electronics Waste (E-Waste)



NIH Recycling Program

HOW ARE WE DOING?

- Current monthly average is about 40% which includes both the mandatory and voluntary recyclables
- Recycling rates as reported to Montgomery County for the mandatory (mixed paper, commingled, cardboard, and scrap metal) recyclables was about 25% for 2007.
- The current recycling goal for businesses in Montgomery County is 50%.
- **A routine waste audit that was done in June of 2007 for building 13 revealed that over 42% of what was found in a representative sample from a solid waste compactor were mandatory recyclables.**
- A follow up audit done in July of 2008 for building 13 found that 38% of the contents were mandatory recyclables weighing over 2540 pounds with the majority of it being mixed paper (2340 lbs).

NIH Recycling Program

What is the Future of Recycling at NIH?

•ZERO WASTE

- To be considered a "zero waste" entity, you must be able to divert 90% or more of wastes generated from going to the landfill.

- Zero waste is a fresh approach to waste management and the use of resources. It goes beyond the "end-of-the-line" treatment of waste and promotes not only the three "R's" (reduce, reuse, recycle), but also focuses on a "whole system" approach to the use of resources.

- Zero Waste is a philosophy and a design principle for the 21st Century. It includes 'recycling' but goes beyond recycling by taking a 'whole system' approach to the vast flow of resources and wastes through human society.

- Zero Waste maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.

NIH Recycling Program

What is the Future of Recycling at NIH?

• Examples of Zero Waste Success in the Business World

- Hewlett-Packard (9,000 employees) is diverting 92-95% of its solid waste; saving almost a million dollars a year in avoided waste disposal costs.
- Toyota says it has a 97 percent zero-landfill status average over its 14 assembly plants.
- Copy-machine maker Ricoh has been zero-landfill at its U.S. plants since 2002.
- Anheuser-Busch has been able to recycle 99 percent of the solid waste generated at its 12 breweries.
- Subaru says that 99.8 percent of the refuse from its Indiana plant - on track to produce 180,000 cars this year - is recycled or reused so it doesn't go to a landfill.

NIH Recycling Program

Future of Recycling/Zero Waste at NIH

•SOME ZERO WASTE GOALS FOR NIH

- Individual recycling at workstations by all employees
- Composting of food scraps from cafeterias
- Composting of animal bedding
- Promote zero waste for special events held on campus
- Construction debris recycling
- Reduced waste through “Green Purchasing”

NIH Recycling Program

Recycling Behavior Changes

- Recycling at the individual workstations has to become a priority. To help with this effort, the use of desk side recycling containers is being highly encouraged.
- Office Paper Practices
 - Make double sided copies when possible
 - Make scratch pads from used paper
 - Do not print emails unless necessary
 - Buy recycled paper
 - Proof documents on the computer before printing
 - Adjust fonts, margins and spacing to fit more text on a standard sheet

NIH Recycling Program

With our current system of production, consumption and disposal, landfills are filling up and natural resources are being depleted. That's why it is important for everyone - from individuals to corporations - to rethink our ideas about trash disposal. By reducing the amount of trash that is being produced and reusing materials that we already have, we can all help to not only protect the environment and conserve natural resources, but we can also sustain the environment for future generations.

“Please stop and consider if it can be **recycled** before throwing it in the **trash**; **If in doubt – recycle it.**”