



Environmental Management

National Aeronautics and
Space Administration



June 2012 Newsletter

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Visit us on the web for more information
about Goddard's environmental programs
and other outreach bulletins at

<http://code250.gsfc.nasa.gov/outreach.cfm>

Riparian Buffer Zones *Helping Streams Go Au Natural*

By Rebecca Ford and Violeta Castro
Code 250

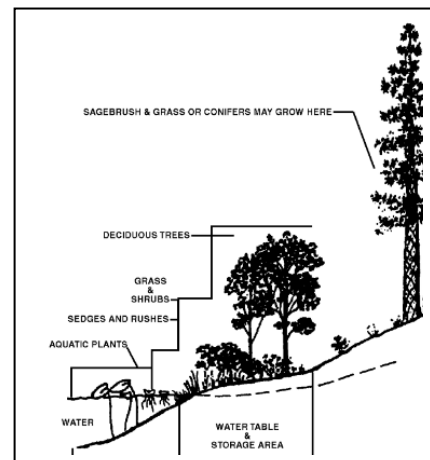
What is a Riparian Zone?

Have you ever stopped to notice a healthy stream? A healthy stream includes riparian zones, which are long strips of vegetation located adjacent to the water course. These strips of lush land directly influence the streams, and are home to an essential and complex ecosystem comprised of unique plants, microorganisms, animals, soil, and water. Riparian zones can vary greatly in width depending upon the type of river or stream and the existing floodplain.



Riparian Zones in Action

Riparian zones are vital to healthy streams because they provide a buffer between the land and water. The extensive vegetation of a riparian zone stabilizes stream banks, prevents erosion, and stores nutrients that would otherwise pollute waters and cause damaging downstream effects. Their capacity to hold excess water during floods prevents downstream erosion and damage by



slowing down the velocity of runoff and allowing water to infiltrate the soil before reaching the stream. Here in the Chesapeake Bay watershed, riparian zones are critically important for removal of common

pollutants in runoff, such as nitrogen, phosphorous, and sediment.

Danger Zone

Riparian zones are directly affected by endless urban and residential development, and agricultural and other land use. Development leads to the addition of impervious surfaces and land destabilization. Grazing from farm animals can also decrease riparian zones and encroach on the natural habitat of dependent organisms. Most Americans live within ten miles of a polluted stream, making it a unifying concern.



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This barren wasteland demonstrates the result of extreme cutting and grazing. The lack of a riparian buffer will allow polluted stormwater runoff and sediment to flow directly into the stream.

How Does a Stream Get Its Groove Back?

With the right approach, riparian zones can be restored to their natural state to provide cleaner water that all can enjoy. Restoring riparian zones to a more natural state ensures cleaner water for aquatic organisms and allows the community to reap the benefits of a healthy

stream. Creating riparian zones includes extensive communication between landowners, public agencies, and responsible parties to come to a cost-effective and feasible solution. Once an assessment of the stream is conducted, the creation of a riparian zone must include building up a vegetative buffer.

Native vegetation may be allowed to regenerate or, in some cases, may need to be planted directly as seeds, seedlings or mature trees. It may even be necessary to remove invasive plants or excavate overly compacted soil.

The approach taken depends on the specific challenges at the site. A newly regenerated or created riparian zone requires



A stream restoration effort to remove invasive plant species.

extensive protection as young plants are highly susceptible to other competitive plant species, animal foraging, and other external forces. Caring for the new riparian zone protects the investment into the stream and ensures a successful outcome: cleaner water and

a healthy, thriving ecosystem.

Learn about Maryland's Riparian Forest Buffer Initiative and Stream ReLeaf Program at

<http://www.dnr.state.md.us/forests/programapps/ripfbi.html>. ❖

Goddard's Hazardous Waste Program

By Lixa Rodriguez-Ramon
Code 250

Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment. There are very stringent requirements for the management of hazardous waste; therefore, it cannot be disposed of by common means like other by-products of our everyday lives. Hazardous wastes can be liquids, solids, gases, or sludge. Examples of waste include a rag with solvent, an aerosol can of cleaner, oil or discarded lab chemicals.

Management of hazardous waste depends on the nature of the waste itself. The word management is a broad term used to describe the disposal, reclamation, recycling, and reuse of waste. GSFC is bounded by specific federal regulations in the Resource Conservation and Recovery Act in its management of waste generated on Center.

There are several actions you can take to ensure that the waste generated at your lab or shop is properly managed.

- **Notify the Medical and Environmental Management Division (MEMD)** of planned activities that may generate hazardous waste, changes to processes, or changes of the amount of waste generated.
- **Provide information** to properly characterize the waste in order to determine *where* and *how* the waste may be disposed. The information needed may include your general knowledge about the waste, analytical testing, material safety data sheets, and work instructions. We need this information *BEFORE* we can pick-up your waste.





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HAZARDOUS WASTE SERVICES

THE MEDICAL AND ENVIRONMENTAL MANAGEMENT DIVISION, CODE 250, PROVIDES SIMPLIFIED TOOLS TO HELP THE CUSTOMER MANAGE HAZARDOUS WASTE. SOME OF THE SERVICES MEMD PROVIDES ARE

- ANNUAL TRAINING;
- ASSISTANCE TO IDENTIFY AND CHARACTERIZE HAZARDOUS WASTE (REQUIRED BEFORE WE PICK-UP THE WASTE);
- ASSISTANCE IN PLACEMENT OF SATELLITE ACCUMULATION AREA;
- DEVELOPMENT OF HAZARDOUS WASTE PROFILE;
- RECORDS KEEPING OF DOCUMENTATION FOR WASTE GENERATING ACTIVITIES;
- PROVISION OF BINDERS THAT INCLUDE SUMMARY REPORTS OF WASTE, WASTE PROFILES, LABELS, AND GSFC FORMS FOR INSPECTIONS.



- **Inspect satellite accumulation areas** on a monthly basis and document the inspection on form GSFC 23-63 (available through GDMS). Maintain records for three years.
- **Use the Electronic Management of Operations Directorate system (eMOD)** to request a waste pickup (<https://emod.wff.nasa.gov/emod/>).
- **Store waste properly** in its own waste container labeled with its contents.
- **Take Hazardous Waste Management Training annually.** The training is offered in a class setting during the Safety Awareness Campaign week or you can take it on SATERN. ❖

Lixa Rodriguez-Ramon, Hazardous Waste Program Manager
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Your commitment to proper hazardous waste management will improve regulatory compliance, reduce the chance of fines or penalties, and help make Goddard a leader in environmental stewardship.

Green Your Office Move

By Janine Pollack

Code 250

It seems as though this Center is in a constant state of flux. Whether it's just down the hall or across campus to another building, many of us are often on the move to a new office. Our office alone has moved twice in the past seven years and we have another move planned for early 2013. Throw in the occasional retirement and even more offices are routinely getting cleaned out. If you're like most people, you wait until the last minute to pack up your things because you still have to get your work done, right? And then, the crunch is on! Most of your stuff gets piled into boxes and the rest gets chucked into the trash. But, wait... there are *better* options!



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Greening your office move will take a bit of proactive planning on your part. Find out who is coordinating your move and work closely with them. Ask Melwood (6-8282) for large bins to accommodate the recyclables and trash you and your officemates are bound to generate. If you still don't have enough capacity, you can always put out your own cardboard boxes. Make sure to label them so it's clear what people can throw into each one. Recycling is easy: just throw in all that paper that's been sitting in binders and notebooks at your desk for the past ten years along with cardboard, magazines, and old soda cans or water bottles you've been storing. Rinse drink and food containers before recycling them or you might get some unwanted visitors crawling through your office. If you have any questions about what can be

recycled, call Kenny Williams in the Facilities Management Division.

Recycling isn't the only thing you can do to keep your office waste out of the landfill. You can also find a new life for all of those unwanted office items you have. You know, the binders from training courses you took years ago or all of the pens you've



Tragedy averted! Tagged property, common office items, and recyclables rescued from a dumpster.

collected from the last two year's worth of conferences or the jumble of paper clips crowding your desk drawer. You know you won't use them and you don't want to pack them, but they aren't ready for the trash either. This is where **Freecycle@Work** comes in! Through this website, you can advertise your unwanted or unneeded small office items, and other employees here on Center who need those items will come and take them off your hands. It's a win-win situation for everyone involved. If you need assistance, call me, Janine Pollack, and I'll help you get the ball rolling.

Finally, for any tagged property items, larger items or supplies you know no one else can use (used CDs, for example), call Property Disposal to help you. They will arrange to pick up these

items, take them to the Center's warehouse and find them a new home that isn't the landfill.

While trashing everything may be easier than doing a bit of sorting, ask yourself if it's the right thing to do. Though it may require a *little* more work on your part, recycling, Freecycling or sending things to the warehouse aren't on the level of filling out your taxes or renewing your license at the DMV. You may even find yourself saying, "Now, that was easy!" at the end of it all. And you can give yourself a pat on the back, knowing your extra effort will pay off by conserving resources and helping a fellow employee and the Center. ❖



What's wrong with this picture? These were all items found in the dumpster following an office move. Instead of trash, these items would be welcome additions to many an office if only posted on Freecycle@Work.

Freecycle™@Work
@nasa.gov

Freecycle@Work.....Janine Pollack (6-0509)
Recycling Coordinator.....Kenny Williams (6-1106)
Property Disposal.....Dorothy Williams (6-9625)
Office Move Coordination.....Margaretta Davis-Hall (6-5200)

<http://freecycle.gsfc.nasa.gov>
<http://recycle.gsfc.nasa.gov>

*Environmental Management Newsletter Editor
Lori Levine, Code 250*