

Green Matters

DPW Environmental and Natural Resources Division

Fort Gordon, Ga.



How Technology Impacts the Environment



Fort Gordon supports numerous missions...including communications training and operations, military intelligence, cyber operations, and many others. Technology today is so advanced and without the necessary tools the Army's missions would drastically be halted. Computers make it happen. Sometimes I believe we get caught up in the "oohs" and "ahhs" of technology that we forget about the "boos" and "uh-ohs". Everything we do impacts our surroundings to some degree and computers and technology are no different. Here are some ways that technology has and can impact our environment in a negative way:

Potential Environmental Impacts:

- ⇒ **Pollution** - Using equipment leads to air, water, heat and noise pollution.
- ⇒ **Natural resource consumption** - Coal, gold, and other natural resources are consumed for technology. Trees and water are also affected through contamination.
- ⇒ **Waste** - When computers and electronics get broken, damaged, or outdated, they are thrown out by manufacturers and consumers and coined as "technotrash". Hazards are present in technotrash such as cadmium, lead, and mercury that can harm the environment. They are not biodegradable.
- ⇒ **Carbon emissions** have a negative impact on the environment. We put off carbon emissions whenever we use something that is powered by electricity.



We can still reap the benefits of technology, and if we all make choices that are greener we can reduce the negative impacts on the environment.

What You Can Do

Inside this Issue

- ◇ **The 411 on Stormwater Pollution** 2-3
- ◇ **Compliance Points to Ponder** 4
- ◇ **The Dangers of Anti-freeze** 5
- ◇ **Updates/Events** 5
- ◇ **EPAAS news** 5



- Before you trash your outdated device, think about donating it. Phones can be donated to soldiers overseas or for victims of domestic violence. What a wonderful use for your so called "trash".
- Recycle your electronics properly. Don't just toss them in the trash. Find a recycling center that takes technotrash.
- Purchase devices made from recyclable materials.
- Buy energy efficient electronics. Look for the Energy Star label
- Buy from Greener companies. Do some research and find companies that are "Green Companies". To confirm a company's "greenness", check out GreenwashingIndex.com.



The 411 on Stormwater Pollution

In my newsletters you have often heard me refer to stormwater drains, stormwater pipes, and stormwater pollution. But what actually is meant by stormwater pollution?

What is stormwater pollution?

Contaminants that reach the surface infiltrate stormwater. Stormwater is "runoff generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground." (EPA)

Some common pollutants include:

- ⇒ Trash (cigarette butts, food wrappers, plastic bags, cups, etc.)
- ⇒ Contaminants (motor oil, antifreeze, pesticides, fertilizers, human and animal waste, etc.)



Issues related to Stormwater Pollution

Anything that has been discarded and tossed onto the ground qualifies as stormwater pollution. Some objects such as plastics and Styrofoam are not biodegradable, and they can harm our wildlife on land and in the water.



And don't forget the impacts that it has on human health. Here at Fort Gordon our main drinking water source is the Savannah River. Whatever we put into the water will make its way into the fish that we eat and other wildlife



that use the river as a water source. Polluted water is harder to clean and costly as well. We use the Savannah River as well and the Augusta Canal for recreational purposes. We put ourselves into direct contact with it. It is essential that we remain good stewards of the environment, and take care of our natural waterways.

Flooding is another issue you may not think about as a stormwater pollution problem. When people litter, garbage and debris can clog the drains and pipes which lead to flooding of streets, parking lots, and neighborhoods.

Common Sources of Stormwater Pollution

- **Vehicles** - Vehicles are always leaking fluids onto the streets and parking areas. Once they hit the surface they are fair game for stormwater pollution.





- **Roads and Parking lots**– Since these surfaces are impervious (water doesn't flow thru them), the water runs off of them straight into the storm drains and ditches.

- **Landscaping/Gardening**– Fertilizers and pesticides applied on residential lawns, as well as cemeteries, golf courses, and parks, are a major source of pollutants. Water sampling has proven a direct link between the chemicals found in landscaping products and water quality. It's important when applying these chemicals to always follow proper application, and avoid over applying.



- **Construction Sites**– The problem with construction sites is that if silt fences and other BMPs aren't in place, then an excess of sediments (*"particulate organic and inorganic matter that suspended in or are carried by the water, and/or accumulate in a loose, unconsolidated form on the bottom of natural water bodies"* EPA) can be unloaded in other streams and creeks. This abundance of sediment can effect the aquatic life by burying it in sediments. Studies have been done that suggest inadequately maintained construction sites can release 7-1000 tons of sediment per acre during a year, where as a emergent forest or grassland releases 1 ton or less.

- **Uncovered drums/containers/debris** - Drums, debris, paint cans, pesticides, etc. left uncovered or unsealed are a potential nightmare for stormwater. Contaminants from uncovered containers will be spread due to precipitation and winds. If you must store containers out in the open, be sure to cover and secure with a tarp, although in a covered area is best.



Some common pollutants that are found in the storm drain systems on a regular basis include paper, human and animal feces, paint thinner and paint items, oil, pesticides, Styrofoam cups, antifreeze, golf balls, dirty diapers, and carcasses. Everything that we do as a community has the potential to impact the environment in a negative way. Just one person changing their habitats can make a difference. It all starts with you!

For more information on Stormwater issues please call DPW Environmental at 706-791-8976.

Waste Accumulation Guide: Reference: 40 CFR 262.34;CFR 173,178,179

	Hazardous Waste	Non-RCRA Regulated Waste	Universal Waste	Unknown Waste
Quantity Limits	Maximum of 55 gallons at each Satellite Accumulation Point	NONE (Use best management practices.)	5000 kg (11,000 lbs)	1. Call the service order desk at 791-5220 for analysis of waste.
Time Limits	3 days or 72 hours Time starts when container is full and ready to turn-in.	NONE (Use best management practices)	8 months. Time starts when waste is first placed in the container.	2. Call Environmental Office, 791-2511 for results.
Labeling Requirements (Use the HW Profile to fill-in label)	Label container with Hazardous Waste label. Fill-in: <ul style="list-style-type: none"> Generator information EPA ID Number DOT proper shipping name EPA waste number/s Add Accumulation Start Date When Full **Waste is placed under the Satellite Accumulation Point (SAP) sign. **	Label container with NON-RCRA Regulated Waste label. Fill in: <ul style="list-style-type: none"> Generator information DOT proper shipping name	Label container with Universal Waste label. Fill-in: <ul style="list-style-type: none"> Accumulation Start Date when waste is first placed in container DOT proper shipping name	Hazardous Waste profiles, 791-6136. 4. Label container with information contained on the Hazardous Waste profile 5. Follow guidance on quantity, time, labeling, storage, inspection, and disposal requirements for waste category.
Storage Requirements	<ul style="list-style-type: none"> Keep containers closed at all times except when adding or removing waste. Keep container in good condition Waste must be compatible with contents Containers must be segregated by compatibility 			
Inspection Requirements	Inspect containers weekly, Document inspections, and immediately act to correct problems.			
Disposal	Turn-in all waste at the Hazardous Material Control Point (HMCp). Call 791-9824 to make an appointment to turn in waste. Complete Turn-in document, 1348-1A			
Contact Information	Hazardous Waste Management : Brad Link, Bradley.Y.link.civ@mail.mil , 791-6136 Satellite Accumulation Point Inspections: Neal McClellan, neal.mcclellan@us.army.mil , 791-6127 Hazardous Waste Management Training: Stephanie Hadley, stephanie.m.hadley@us.army.mil , 791-6278 SPILL: Call 911---or--- SPILLS in Training Areas – Notify Range Control – 791- 5008/5005			

This time of year as the temperatures drop we must make sure that our vehicles are prepped to handle the freezing temperatures. The water in our radiators need antifreeze. Just as the word says, it keeps water from freezing. What some may not know about this chemical is that is sweet to the taste, now how they know this, I am not sure because to know that it is sweet would indicate to me that some brave individual had to taste it...right? Well, it can be deadly if ingested in the right amounts. Every year as many as 4,000 children and



10,000 to 90,000 animals are estimated to be killed or injured by ingesting this sweet but deadly toxin!

Antifreeze poisoning can lead to kidney or heart failure, brain damage and ultimately death. It only takes about a few ounces to be fatal to a small child. Three to four tablespoons can take down a medium dog, and a cat only needs one or 2 teaspoons to be fatal. If an animal simply walks through some spilt antifreeze and gets it on his paws, a few licks could be deadly.

Leaking hoses and radiators and flushing and filling radiators are the common culprits for exposing this toxin to pets and children. Shockingly, about 2% of antifreeze is also found in snow globes as well.

Symptoms of Antifreeze Poisoning

The first stage of poisoning is that the victim appears drunk or disoriented along with vomiting. This usually begins within 30 minutes after ingesting and can last up to an hour.

In the second stage, the victim actually seems to be getting better, but the liver is trying to metabolize the ethylene glycol, the main ingredient in antifreeze. In 12 to 36 hours the kidneys will start to shut down and no longer function; the victim could then go into a coma. If you are fortunate enough to recognize the first stage, you can get your pet or loved one to a medical professional for a good chance of a recovery.

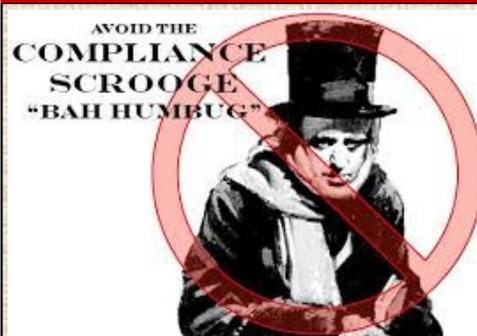
Proper Disposal

Because of the lead, cadmium and chromium that is in antifreeze, the EPA says that it is a hazardous waste that needs to be properly disposed of:

- Never dump antifreeze on the ground or in stormdrains, storm ditches, sewer systems, or sanitary systems.
- Clean spills up immediately using dry sweep or rags, and then bag those items quickly. Clean the area with soap and water.
- Never leave it unattended and store in a place out of reach of children.
- On Fort Gordon, antifreeze can be taken to the HMCP (Hazardous Material Control Point) for disposal. If you are not sure how to properly label it you can call DPW Environmental at 706-791-6136/6127.

Using a less-toxic type of antifreeze is another option to keep children, pets, and the environment safer. For more information visit www.epa.gov/epaoswer.nonhw.muncpl/antifree.htm.

UPCOMING EVENTS/TRAINING



EPAAS is coming to town!
DEC.7-11 @ FT. GORDON & GILLEM ENCLAVE.

ENRMO would like to give a "SHOUT OUT" to all the units and organizations that have risen to the challenge of Environmental Stewardship!

- * Dec. 16 Stormwater Industrial Training, 0900-1300, Bldg 11307

MERRY CHRISTMAS



SOURCES

<http://www.northaugusta.net/Home/ShowDocument?id=2531>

<http://www.carnegiecyberacademy.com/facultyPages/environment/issues.html>

www.epa.gov

<http://www.carnegiecyberacademy.com/facultyPages/environment/issues.html>

<http://www.northaugusta.net/Home/ShowDocument?id=2537>