



P2 Quarterly

The Newsletter of Lee
County's Pollution
Prevention Program

Spring 2004

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What If We Thought Differently

Here in our corner of paradise, we enjoy some of the best weather and outdoor activities in the world. In the last 20 years the population growth of the area as well as tourism has lead the Nation! We boast new records for housing starts and commercial growth as well as visitors from the US and the world who fuel our "season". Because of the weather and natural resources we enjoy in Southwest Florida, there are many opportunities for outdoor activities such as golfing, fishing, boating, skiing, diving, hiking, biking, picnicking, the beaches and recreational sports. The common denominator for all of these activities and the main reason behind the growth in population is our environment.

Ever wonder what this area would be like if there were no environmental protection agencies? What if there were no Federal agencies like the Environmental Protection Agency (EPA), United States Coast Guard (USCG), United States Army Corps of Engineers (USACE), and/or State agencies like the Florida Department of Environmental Protection (FDEP) or the Florida Fish and Wildlife Conservation Commission (FFWCC)? The people entrust all of these agencies with the responsibility to protect the environment from which all life forms depend for survival. With all of this protection, why is our water and air quality getting worse?

Is the current theory of allowing pollution to occur within "acceptable levels" through a permitting process flawed? The claim from industries that they are not polluting because they are in compliance with their permit is false and very misleading. And if the "acceptable levels" of the permit are not breached, maybe the process doesn't look closely enough at all contributing factors in the cause of the pollution and its' impact. The governmental agencies go through very expensive processes to protect marine mammals, fish, birds and their habitats in which they depend for survival. All living things on Earth rely on clean water. If we do not stop pollutants from getting into our stormwater, the expensive rule process we currently rely on for protection will not matter. In another 10 to 15 years, the water quality will not be good enough to support the environment that keeps our paradise healthy.

There are professionals who claim we have the technology to clean up the environment. To date we have no technology to clean the air. We have no technology to clean up spills of Dense Non-Aqueous Phased Liquids (DNAPL) that enter our ground water. In fact where this has occurred, the contamination has melted the monitoring wells. The solution to this problem is not more regulations. The solution can be found in the methods of management utilized in processes at facilities. Prevention through methodical standards is proven to be the best approach in dealing with this situation.

We've tried to regulate the "end of the pipe" with disappointing results and very high expense. Maybe if we could focus on prevention methods utilizing existing funds and labor we could realize the operational and liability savings. There are opportunities for new types of businesses that focus on pollution prevention. What if we tried that approach for a change!!

Do you need a speaker for an upcoming event? Would you like a specialized presentation for your next trade association meeting? Give us a call to schedule a time for your next educational needs. Lee County's Pollution Prevention Program has performed presentations in several parts of the country as well as Canada and Mexico. We are here to serve our business community. Just call 479-8126.

E-Waste Facts

Electronic waste (e-waste) is growing at **three times** the rate of any other waste. US EPA states that **20 million computers** became obsolete in 1998, **only 13% were reused or recycled** (2).

Electronic waste can consist any of the following:

- Television
- Computer Monitor
- Computer Central Processing Units
- Peripherals such as keyboards, mouse, printer, scanner, modems, cables
- Desktop telephones
- Fax machines
- Portable telephones
- Communication radios

E-waste can contain the following Hazardous materials:

Television and computer monitors contain cathode ray tubes (CRT). CRTs contain **lead**, a highly toxic heavy metal. The Department of Environmental Protection states that CRTs may be the largest source of **lead** in Florida's solid waste stream (1).

- **Each** computer or TV display contains an average of **4 to 8 pounds of lead** (3).
- 315 million computers became obsolete in the years 1997-2004. These computers contain a total of more than **1.2 billion pounds of lead** (3).
- Monitor glass contains about 20% lead by weight (3).
- Lead can also be found in computer circuit boards (3).
- Consumer electronics already contribute to 40% of the lead found in landfills (3).
- Lead accumulates in the environment and affects the nervous system, blood system, kidney, and developing brain of children (3).
- Lead can leach from landfills and go into your drinking water.

Cadmium is another heavy metal that comes from computers. The largest source is Nickel Cadmium batteries found in laptops,

Cadmium can also be found in circuit boards (3).

- Estimated **2 million pounds** of Cadmium is contained in the 315 million computers that became obsolete in 1997-2004.
- Cadmium accumulates in the body, particularly the kidneys (3).
- It can enter your system through breathing or eating/drinking.
- This is important in Lee County because we incinerate our waste, this causes cadmium to be released into the air and settle in the water.

Mercury is a heavy metal found in electronic waste.

- **An estimated 70% of heavy metals (this includes mercury and cadmium) found in landfills come from e-waste** (3).
- **Mercury** can be found in computer switches and flat panel screens
- **Mercury** accumulates through the food chain, especially in fish.
- It can damage brain function.
- 315 million computers that became obsolete between 1997-2004 contained **400,000 pounds of mercury** (3).

Hexavalent Chromium (Chromium VI) is still used by some manufacturers as corrosion protection of untreated steel.

- Chromium VI easily passes into your system through cell membranes. It can cause DNA damage.
- Asthmatic Bronchitis is an allergic reaction linked to Chromium VI.
- 315 million computers that became obsolete in 1997-2004 about **1.2 million pounds of Hexavalent Chromium was present** (3).

Pollution Prevention For E-Waste and What you can do to help?

Reduce

- Use equipment as long as possible
- Upgrade a slower system to get more use out of it
- Consider a lease where you can trade up to a faster system

Reuse

- Refurbish

Recycle

- Electronic equipment can be recycled for metals, plastics, glass, etc.
- Check with the location you purchased your equipment from or the manufacturer, some offer a return program.
- Bring it to the Business Collection day at Page Field for recycling.

Sources:

- (1) www.dep.state.fl.us/waste/categories/electronics/pages/contacts.htm
- (2) <http://florida.earth911.org>
- (3) www.svtc.org/cleancc/pubs/poisonpc2004.htm

Medical Facilities Need a Fix

Did you know used fixer solutions from x-ray and film processors are considered **toxic** by the EPA? Recent field assessments have uncovered a large percentage of medical facilities mismanaging their x-ray processor waste including used fixer and waste film. One facility is discharging their silver waste directly to a septic tank, which is extremely prohibited. Others are discharging photographic waste to a sewer system (Publicly Owned Treatment Works-POTW) with no silver recovery prior to discharge. Most are unaware of obtaining permission to discharge this type of waste from their local sewer district's "pretreatment officer."

When processing x-rays from small intra-oral packets found in dental offices to larger films used in chiropractor and veterinarian offices, three basic steps are involved:

1. Development of images;
2. Removal of some or all of the silver; and
3. Stabilizing the image with rinse water.

The remaining silver is removed from the images and found in the used fixer solutions. Up to **80% of silver ends up in the fixer solution** and approximately **40% of silver remains in the film** as the metallic silver image. Eventually these solutions have to be replaced and waste film recycled.

Silver recovery is necessary for any industry that processes film. The EPA has set discharge limits of **5ppm** to be discarded to the sewers. Too much silver will destroy the "good" bacteria found in a sewer system and needed for effective operation. Local Publicly Owned Treatment Works (POTW's) have imposed their own more stringent discharge limits to stay in compliance with their operational permit for silver content in their sludge, Florida Administrative Code (F.A.C.) 62-625. Lee County Ordinance Number 98-20 states Lee County Utilities **silver discharge limit is .10 mg/L**. Fort Myers Utilities **discharge limit is .73 mg/L**. In Europe, the **discharge limit is zero!**

When a facility elects to discharge their photographic waste solutions to the POTW, they **must receive permission from the sewer district's "pretreatment officer."** A facility will first have to test the effluent for the amount of silver still being discharged. If this amount meets the local POTW's limit, a "letter of permission" to discharge will be granted. Please contact your local utilities for further information and compliance.

There are several types of silver recovery methods including:

- Metallic Replacement
- Electroplating
- Ion Exchange
- Evaporation/Distillation
- Chemical Precipitation
- Reverse Osmosis/Ultrafiltration

Selection of the appropriate method depends on the size of processing facility, amount of film processed, waste disposal or discharge requirements, and costs for management of the equipment. Other economic considerations include initial equipment cost, the amount and value of silver recovered, and the return on investment.

An alternative to on site recovery is to collect used fixer solutions in DOT approved containers and have the waste hauled off by a licensed commercial hazardous waste hauler. Off site recovery can be done on a **larger, more efficient scale** and works best **for the generator who desires a minimum commitment**. Proper documentation (date, amount, company name) from the hauler is required!!

For a list of properly licensed x-ray/photographic waste services and/or to request a site visit, please contact the Pollution Prevention Program @ 479-8126.

What Is Florida's NPDES Stormwater Permitting Program for Industrial Activity?

In October 2000, the U.S. Environmental Protection Agency (EPA) authorized the Florida Department of Environmental Protection (DEP) to implement the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program in the State of Florida (with the exception of Indian country lands). The program regulates point source discharges of stormwater runoff from certain industrial facilities. The operators of regulated industrial facilities must obtain an NPDES stormwater permit (*State of Florida Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity* (MSGP) and implement appropriate pollution prevention techniques to reduce contamination of stormwater runoff.

Which Industrial Activities Are Regulated Under the Program?

Florida's permitting program regulates industrial activities that meet both of the following criteria:

- Result in a discharge of stormwater to surface waters of the State or into a municipal separate storm sewer system (MS4)
- Fall under any one of the 11 categories of industrial activities identified in 40 *CFR* 122.26(b)(14). A detailed listing will follow in the next news letter.

What Does the MSGP Require?

The MSGP divides regulated industrial activities into 30 sectors of related activity and specifies both general and sector-specific requirements for each. In brief, the MSGP requires the following:

- An **MSGP Notice of Intent (NOI)** (DEP Form 62-621.300(5)(b)) must be submitted to DEP.
- A **Stormwater Pollution Prevention Plan (SWPPP)**, which must be kept onsite. In part, the plan must include:
 - A site evaluation of how and where pollutants may be mobilized by stormwater and discharged
 - A site plan for managing stormwater runoff
 - Identification of appropriate controls to reduce stormwater pollution (e.g., timely cleanup of spills, covering exposed materials, installing a detention pond)
 - A maintenance, visual monitoring, and inspection schedule
 - A recordkeeping process.
- Analytical monitoring and reporting (not required of all regulated facilities). Industry-specific **Discharge Monitoring Report (DMR)** forms, to be submitted to DEP, are available on the DEP Web site.

For More information please contact our NPDES Team at 479-8121 or 479-8135 or Visit our Website at www.lee-county.com/npdes or DEP's website at www.dep.state.fl.us/water/stormwater/npdes

Renewal of Occupational Licenses

Yes, that time of year will soon be here. In a few months your renewal notice from the Lee County Tax Collectors Office will be on their way! Please read the information carefully to make sure it is correct before renewing the occupational license.

The Pollution Prevention Program receives its' funding from the \$20.00 surcharge attached to your occupational license. The surcharge is for businesses that will generate hazardous waste in their operations. If you believe your business does not generate hazardous waste, contact the P2 Program at 239-479-8126 or 239-479-8519 to verify if you qualify for an Activity Certification Affidavit (ACA). The ACA exempts qualified businesses from paying the \$20.00 surcharge fee. If you pay the surcharge and then apply for the ACA, **there are no refunds of the fee.** Contact our office for an interview before payment is made to see if your business qualifies to receive the ACA exemption.

The Activity Certification Affidavit (ACA) process is **free** to the applicant. In the near future there may be a fee charged for the processing of the ACA. The cost associated with the ACA process has been absorbed in the past, but changes may be required to prevent an increase in the current \$20.00 surcharge to non-exempt occupational license holders.

The P2 Program has processed several thousand ACA's since the beginning of this State mandated program began. The mandate requires counties to notify and then verify the any business with the potential to generate hazardous waste. The ACA process saves the P2 Program thousands of dollars in performing field verifications at businesses that do not generate hazardous waste. Every business that has an office with florescent lights has the potential to generate hazardous waste from the improper handling of the bulbs. The P2 Program educates the business with the proper handling requirements of any waste stream that the facility may generate. If you need assistance and/or have questions regarding regulatory requirements, the \$20.00 is what/why you pay us to help figure out the compliance requirements of your facility's operations.

**The CESQG Business
Collection Day Schedule
Sponsored by :
Lee County's
Department of Solid Waste
(Disposal Fee Involved)**

**July 22, 2004
October 21, 2004**

**Collection times for the CESQG
scheduled events are from
8:00 a.m. to 3:00 p.m. Location
of the CESQG collection day is
North Airport Road at Page Field.
Scheduled collection days and
times are subject to change
and/or cancelations, depending
on inclement weather. *There is a
fee involved for disposal.* If you
have any questions regarding the
associated fees, please contact
US Liquids of Florida directly at
1-800-624-5302.**

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