
2014 ANNUAL REPORT ON THE ENVIRONMENT

CHAPTER VI

**HAZARDOUS
MATERIALS**

VI. HAZARDOUS MATERIALS

A. ISSUES AND OVERVIEW

1. Overview

Fairfax County hazardous materials issues have not changed much in the last few years. Although the resources that address hazardous materials have been reduced during the budget challenges of the past few years, the county has adapted and become more efficient and effective. Fairfax County is relatively “clean” but we have our share of problems. The main concerns are hazardous materials incidents involving spills, leaks, transportation accidents, ruptures or other types of emergency discharges. Secondary is the use and disposal of hazardous materials in either daily household activities or by small quantity commercial generators. The final concern is the clean-up and regulation of hazardous materials.

Although the news media reports industrial and transportation related hazardous materials incidents, there is a general lack of awareness by the public of health and safety risks associated with the use, storage and disposal of common household hazardous materials. Educating the public on the implications of these hazardous materials on peoples’ lives remains a significant goal.

The discarding of older model televisions, as well as computer monitors and peripherals, requires continued effort to help keep lead from entering the solid waste system. Compact fluorescent light bulbs contain small amounts of mercury; they therefore must be disposed of properly when the bulbs are used as well as if they are broken. With the 2012 mandatory change to compact fluorescent light bulbs, proper disposal will become a bigger issue and the county has expanded its capability to support this requirement.

FY 2010 budget impacts that had direct impact on environmental programs include the reorganization of the Hazardous Materials and Investigative Services Section and the loss of the Local Emergency Planning Committee Coordinator. The HMIS reorganization did not involve any reduction in service or mission objectives for the section. Resources were reallocated to better distribute workload and address concerns for officer safety and staffing.

The Fire and Rescue Department is using Tier II Manager Software. This allows for Web-based entry of Tier II information by submitting facilities. The most significant advantage of this software is that it automatically generates the Hazardous Material Emergency Response Plan for the critical hazard facilities. This system now has over 500 total facilities in the system. Tier II reviews were conducted for county facilities between January and March 2014. (13)

The Fire and Hazardous Materials Investigative Services Section initiated a records management system in 2012 called Fire Files. This new RMS combines previously collected data from the section's Hazardous Materials Complaint Database and its Fire Investigations Case Files into one single records management system.

2. Hazardous Materials Incidents

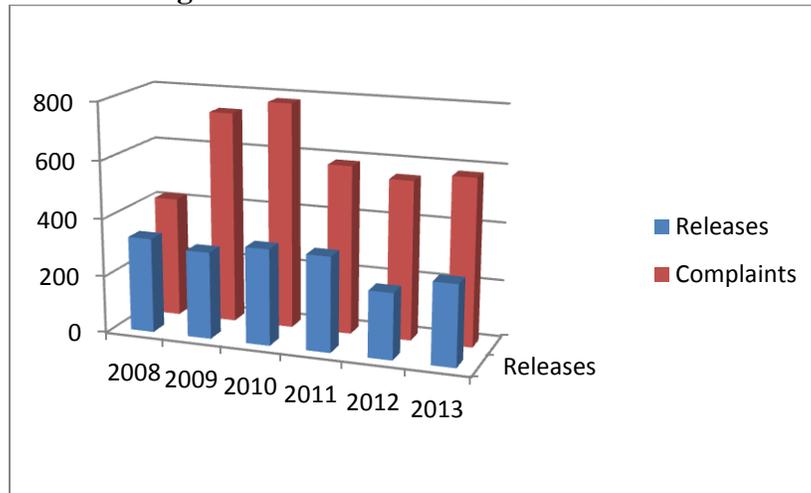
a. Overview of 2013 Hazardous Materials Incidents

The Fire and Rescue Department's Fire and Hazardous Materials Investigative Services Section responds to all reported incidents of hazardous materials releases, spills, and discharges in Fairfax County and the towns of Herndon, Vienna and Clifton as requested or directed by the Fire and Rescue Department's Operation Division's first responders, the Department of Public Safety Communications, other county agencies, the Commonwealth of Virginia and/or complaints from residents. The mission of the section is to prevent the inception or recurrence of fire and hazardous conditions through the enforcement of applicable codes and laws. The section issues notices of violation and summons where appropriate and ensures the proper clean-up of the releases. The section received 579 case entries into its Fire Files record management system in 2013. Of the 579 complaints, 283 were reported spills, leaks or releases of hazardous materials into the environment. Of these 283 releases, 140 involved petroleum based products. There were 21 hydraulic oil spills/releases (mostly from trash trucks), 18 gasoline releases, 30 fuel oil or home heating oil releases and 37 diesel fuel releases. The remainder consisted of a variety of materials including, paint, antifreeze, cleaners, various gases, various chemicals and mercury. There were 33 incidents where the release of hazardous materials did impact storm drains or surface waters. The section tracked 10 sites for both short and long term remediation. The vast majority of these releases were small scale with the exception of an overturned gasoline tanker truck that caught fire and released approximately 8,500 gallons of gasoline into a storm drain system. The section also staffs the Hazardous Materials and Fire Investigations Mobile Lab. The Mobile Lab was requested to address no hazmat incidents and eight fire events in 2013. The trend in the number of case entries and actual spills over the last several years is presented in Table VI-1 and Figure VI-1.

Section personnel maintain relationships with the major hazardous materials pipeline companies and blasting companies that operate in Fairfax County in an effort to reduce risks and increase response capabilities should emergency incidents occur with these operations. FHMIS staff is also working in partnership with multiple other county agencies on the county's new MS4 project in anticipation of the county being issued a new MS4 permit by the EPA. (1)

Table VI-1 Fire and Rescue Department’s Fire and Hazardous Materials Investigative Services Incident Trends		
Fiscal Year	Complaints/Case Entries	Spills, Leaks, or Releases of Hazardous Materials
FY 2013	579	283
FY 2012	552	231
FY 2011	585	331
FY 2010	782	335
FY 2009	735	303
FY 2008	418	330

Figure VI-1: FHMIS Incident Trends

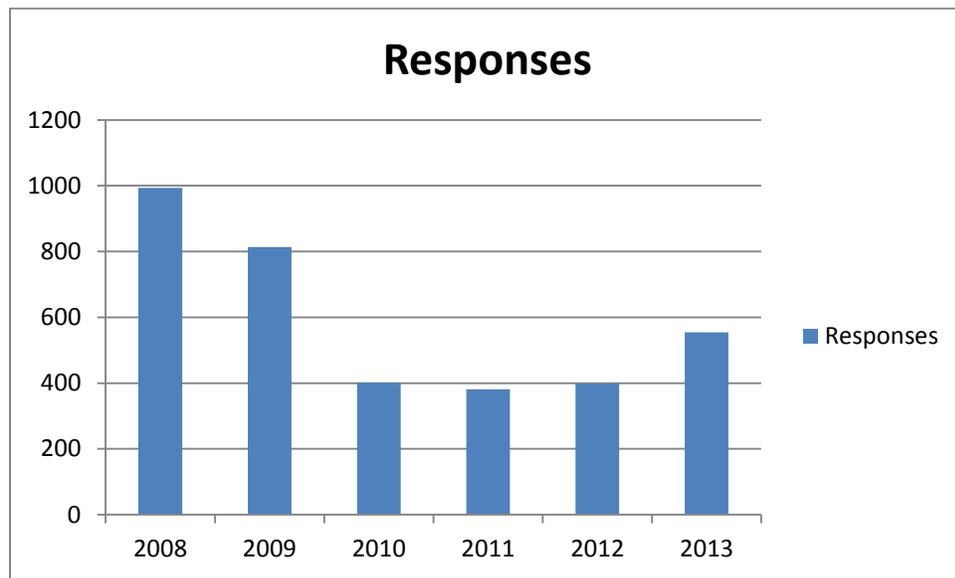


b. Hazmat Response Team Information

The Fire and Rescue Department maintains a well-equipped hazardous materials response team for emergency response. The primary unit operates out of Fairfax Center Fire Station 40. There are four satellite stations located throughout the county in support. These stations are located at Fire Station 1 in McLean, Fire Station 11 in Penn Daw, Fire Station 19 in Lorton and Fire Station 26 in Springfield. These units are strategically positioned to provide rapid response and adequate coverage throughout Fairfax County. Response personnel are trained and equipped to initiate product control and mitigation measures to prevent or minimize the adverse environmental impact and damage. All units are staffed 24 hours per day, seven days per week. (1)

The Hazardous Materials Response Team responded to 554 calls in 2013. The team responded to a myriad of incidents including methane/propane gas emergencies, transformer fires, overturned gasoline/ethanol tank trucks, weapons of mass destruction investigations for suspicious packages or white powder, mercury events, chemical odors or spills, petroleum releases, the dumping of hazardous materials and various other Department of Transportation HazMat-class events.(1) The trend in the HMRT responses is captured in Figure VI-2.

Figure VI-2: Hazmat Response Team Responses



In addition to the efforts of the Operations Division and Hazardous Materials Investigative Services Section personnel, the Fire and Rescue Department maintains a contract with a major commercial hazardous materials response company to provide additional support for large-scale incidents. The Fire and Rescue Department has stressed its commitment to protecting the environment and residents through proper enforcement of the Fairfax County Fire Prevention Code and through rapid identification, containment and cleanup of hazardous material incidents.

The Fire and Rescue Department, in conjunction with the Fairfax Joint Local Emergency Planning Committee, maintains an online software program called Tier 2 Manager. This program allows companies that use, store or manufacture chemicals in the county to report this information electronically to the department and FJLEPC so that the community and first responders will be aware of these chemicals within our community as required by the Emergency Planning and Community Right to Know Act. Emergency planners and response personnel have instant access to chemical inventories and Emergency Response Plans for each facility deemed to be a

Critical Hazard Facility. Additionally, Emergency Response Plans are developed for critical infrastructure facilities such as sewage and water treatment plants and bulk petroleum storage facilities. According to Tier 2 Manager data, there are currently 449 active facilities with hazardous materials. Of these facilities, 133 store Extremely Hazardous Substances above their Threshold Planning Quantities. Of the 449 facilities, eight store bulk petroleum. (1)

3. Hazardous Materials in the Waste Stream

The disposal of household and small quantities of non-household hazardous materials into the waste stream continues to be a concern. Unlike hazardous materials incidents, the immediate impact is not as dangerous. However, the long-term impact can be just as severe. Sometimes hazardous materials are dumped illegally, which leads to stream and groundwater pollution and soil contamination. Household hazardous wastes are products used in and around the home that are flammable, corrosive, reactive or toxic. These hazardous materials potentially can cause a safety problem if various household chemicals become mixed when disposed of with the regular trash. By disposing of household hazardous wastes separately in the appropriate manner, these materials can be properly handled and packaged to minimize exposure to potentially harmful chemicals and decrease the likelihood that these chemicals will enter the environment.

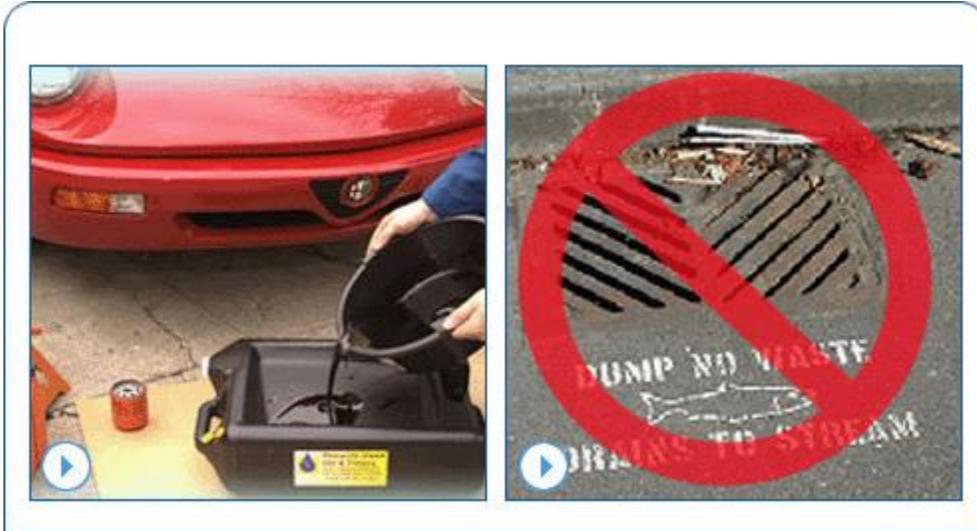
a. Used Automotive Oil and Fluids

Millions of do-it-yourselfer motorists change their own oil. Some of the oil is disposed of properly at a used-oil recycling center. But much used motor oil is being disposed of in garbage cans, sewers, storm drains and backyards – practices that can contaminate soil, local streams, rivers, bays and beaches. One gallon of used motor oil, if not disposed of properly, can contaminate one million gallons of water. (4)

As a part of its ongoing effort to educate all Americans on environmental responsibility, the U.S. Environmental Protection Agency launched “You Dump it, You Drink It” (“Si lo tira, se lo toma”), a new Spanish-language campaign. Despite the fact that about half of all automotive mechanics in the United States are Hispanic, little if any Spanish-language materials exists for the automotive repair industry and those consumers who change their own motor oil. EPA hopes to fill this void through a wide-scale distribution of these materials, which include posters, brochures and bumper stickers. These materials are available to download from the EPA website. (5)

Recycling of petroleum products is less well known than for other products. The recycled used motor oil is used for many purposes. The primary use is to refine it into a base stock for lubrication oil. The secondary use of used

oil is to burn it for energy. If you recycle just two gallons of used oil, it can generate enough electricity to run an average household for almost 24 hours. (4)



Many service stations, repair facilities and quick lubes will accept used oil and used oil filters.

(The American Petroleum Institute-The Oil Recycling Process website: www.recycleoil.org [4])

b. Dumping into Storm Drains

Storm drains carry stormwater runoff from streets (see the Water Resources chapter of this report). This water is not treated and goes directly into local streams. All streams in Fairfax County eventually flow into the Potomac River, which empties into the Chesapeake Bay. Anything dumped down a storm drain will follow the same path as the stormwater runoff. (6)

The cleaning up of animal wastes and the disposal of such wastes down storm drains, as well as the disposal of leaves down the storm drains, are attempts at doing a service that have the effect of introducing pollutants directly into county streams. There are deliberate disposals of chemicals, oils and other items into the storm drains as “out-of-sight, out-of-mind.” In either situation, there is a misperception that the storm drains are part of the county sewage system and that the disposal of materials down these drains does not provide a direct impact to the environment.

4. Pipelines

The following was reported by the Fairfax Joint Local Emergency Planning Committee:

“More than 3,000 companies operate some 1.9 million miles of natural gas and hazardous liquid pipelines in the United States. The pipeline network includes 302,000 miles of natural gas transmission pipelines operated by

1,220 firms, and 155,000 miles are hazardous liquid transmission pipelines operated by 220 outfits. In addition to transmission pipelines, 94 liquefied natural gas facilities operate in the United States.”

Pipelines traverse Fairfax County, carrying refined petroleum for two companies and natural gas for three companies. The Office of Pipeline Safety in the U.S. Department of Transportation regulates pipeline design and the construction, operation and maintenance of pipelines to ensure safe transportation of hazardous liquids and natural gas. (7)

5. Rail Transport of Hazardous Materials

Chemicals and materials that are hazardous have regularly been transported by rail. While having chemicals and hazardous materials transported by rail keeps them off the highways, accidents or leaks have been, and continue to be, a cause for concern. Additional concerns have been introduced as a result of the September 11, 2001 terror attacks, new ethanol transfer stations and the future shipments of nuclear radioactive waste throughout the country.

The July 18, 2001 CSX Train fire in a Baltimore, Maryland tunnel was an unintended incident involving a train car with hazardous materials and had wide-range, long-term consequences. Major sections of the downtown were closed, businesses were impacted, Orioles’ games had to be rescheduled, and portions of a major street were closed for five weeks. (3)

The July 2001 Baltimore tunnel fire immediately got woven into debate of whether nuclear waste could be transported safely to Nevada. Studies in 2003 were performed to determine what would have happened had the train been carrying nuclear waste. Conclusions differed. A state analysis concluded that a cask carrying radioactive spent fuel would have been breached by temperatures inside the Howard Street Tunnel. Escaping radioactive particles would have contaminated 32 squares miles, increased the chances of cancer deaths for up to 28,000 people and cost \$13.7 billion to clean up. The Nuclear Regulatory Commission said the nuclear waste canister would have endured the fire “and the health and safety of the public would have been maintained.” (3)

Rail through Fairfax County is in the eastern and southern portions of the county and does not include tunnels. Residents are generally not located as close to the rails in Fairfax County as in other jurisdictions. However, some hazardous materials, alone or in combination, when released can affect areas up to miles from the initial site of the incident. It is conceivable that Fairfax County residents could be impacted with hazardous materials from a rail incident in another jurisdiction.

B. PROGRAMS, PROJECTS AND ANALYSES

1. Fairfax Joint Local Emergency Planning Committee

Local Emergency Planning Committees are required by Section 301[c] of Title III of the Emergency Planning and Community Right-to-Know Act, a freestanding provision of the Superfund Amendments and Reauthorization Act of 1986. The main thrust of SARA is to identify and clean up waste sites that are potentially toxic. Title III has two important provisions: 1) it provides for emergency response planning to cope with the accidental release of toxic chemicals into the air, land and water; and 2) the community right-to-know provisions of Title III help to increase the public's knowledge and access to information on the presence of hazardous chemicals in their communities and releases of these chemicals into the environment. Under Title III, states are required to organize into planning areas and to establish local Emergency Planning Committees.

The FJLEPC is comprised of representatives of the city of Fairfax, the county of Fairfax, the town of Herndon and the town of Vienna. Committee members include local government officials, police, fire and rescue officials, environmental and governmental planners, public health professionals, hospital officials, public utility and transportation officials, representatives of business organizations, professional societies, civic organizations and the media. These representatives meet six times per year. The FJLEPC: (1) collects information about hazardous materials; (2) develops and updates, on an annual basis, the Hazardous Materials Emergency Response Plan; and (3) provides information to the public about the use, storage and manufacture of hazardous materials. The Plan also contains notification procedures in the event of an incident, on site means of detecting incidents, evacuation routes, clean-up resources and identification of parties responsible for the site. The Annual Plan is exercised regularly. Member organizations have been focused on many exercises, ranging from community response to incidents at the Upper Occoquan Service Authority and the Fairfax City tank farm to active shooter incidents at hospitals and many schools.

FJLEPC provides education and outreach to the public. Information is disseminated through public meetings, brochures, newsletters and a website: www.lepcfairfax.org. The newsletter, which is mailed to civic and homeowner associations, focuses on emergency preparedness, disaster planning and fireworks safety. FJLEPC produced a video about shelter in place. The video is available through any of the Fairfax County public libraries as well as online through the county's "video on demand" service at www.fairfaxcounty.gov/cable/channel16/vod.htm. (8) LEPC members are available to speak to businesses or residents' groups, as requested.

2. Railroad Transportation Plan

CSX Transportation has a hazardous material emergency response plan, “Community Awareness Emergency Planning Guide,” dated October 2008. A written copy of that plan is on file with the Fairfax County Fire & Rescue Hazmat Station 40. (12)

At www.csx.com, CSX reports that each year it moves over 350,000 tons of hazardous materials and has a low number of incidents. For every billion ton-miles of hazardous materials transported, trucks (which operate over inherently more dangerous highways) are involved in 16 times as many accidents as the rails. CSX has achieved a 99.9 percent success rate for safe transportation of hazardous materials. CSX has been involved with years of hearings and legal proceedings concerning the safety with urban rail transportation of certain hazardous materials. Among these is the re-routing of trains around Washington D.C. (9).

3. Storm Drain Education Program

The Northern Virginia Soil and Water Conservation District has coordinated storm drain education in Fairfax County for over a decade. The goal of the program continues to be educating the community about the water quality impacts of storm drain dumping. Pollution that enters our water resources through storm drains is called nonpoint source pollution because it comes from all our homes and communities. Nonpoint source pollution is the leading cause of water quality deterioration in the Chesapeake Bay. During FY 2013, 448 volunteers worked in their communities, logging over 1,500 hours, to carry out 26 projects. These volunteers included scout groups, middle and high school students and homeowner associations. As a result, 11,844 households in Fairfax County received nonpoint source pollution prevention education. This included information about how to properly dispose of pet waste, used motor oil, fertilizer, antifreeze and other hazardous materials. In FY 2013 volunteers labeled 2,688 storm drains, thereby providing an on-going reminder to not dump anything in storm drains. In FY2014, 515 volunteers logged 2,085 hours over 32 projects to label 3,931 storm drains and educate 19,168 households. Since the start of this program, one-quarter of the county’s over 80,000 storm drains have labels. Check NVSWCD’s website to learn more about the Storm Drain Education Program and how civic and community groups can have their local drains marked (<http://www.fairfaxcounty.gov/nvswcd/stormdrained.htm>). (6)

NVSWCD also publishes a quarterly newsletter, Conservation Currents, for Fairfax County residents. Articles are available at the NVSWCD website on hazardous waste reduction, including an article entitled “Healthy Homes, Healthy Communities: Household Hazardous Waste Reduction in Fairfax

County.” The article includes information on how to determine which home products are hazardous waste and provided information on safe disposal. (6)



Pictures of storm drain marking by local volunteers (provided by NVSWCD (6))

A relatively new group of local governments and utilities called the Northern Virginia Clean Water Partners has launched an effort to educate the public about how to prevent water pollution. The group includes: the counties of Fairfax, Arlington, Loudoun, Prince William and Stafford; the cities of Alexandria, Fairfax and Falls Church; and the towns of Dumfries, Herndon, Leesburg and Vienna. Other members of the partnership are Fairfax Water, Loudoun Water, the Northern Virginia Regional Commission and the Virginia Department of Environmental Quality Coastal Zone Management Program. (2)



The logo, and theme, for the Northern Virginia Clean Water Partners (2)

Each spring, NVCWP launches a campaign to remind residents that they can reduce the amount of polluted storm water reaching waterways. The group plans surveys to help quantify the effectiveness of the campaign. It also wants to determine how aware Virginians are of storm water pollution and the behaviors that cause it. Last year’s survey found that, after hearing NVCWP’s radio spot, 12 percent of respondents would be more careful with fertilizer, nine percent would pick up after their pet more often and nine percent said they would recycle their motor oil. (2)

As a member of the Clean Water Partners, Fairfax County participates in the annual storm water education campaign. Print, video and Web-based products (www.onlyrain.org) have been developed to aid in raising awareness about

behaviors leading to non-point source pollution and the actions residents can take to protect local and regional water quality. (6)

To learn more about NVCWP, check its website at: www.onlyrain.org.

4. Household Hazardous Waste Program

The biggest news this year was that the Solid Waste Management Program realigned resources and planned for opening the HHW areas of its disposal facilities to coincide with regular operations of the Recycling Disposal Facilities at both of the major collection sites. The new hours were in effect as of July 1, 2014. EQAC has long advocated for expanded collection capability at permanent and remote sites for the growing amount of household hazardous waste. Expanded collection of the previous monthly Electric Sunday program to an every-day service is very commendable. Remote collection events were conducted quarterly in 2012 through 2014, but they are not planned for 2015. This is a concern to EQAC because the remote collection events target a different customer engagement, but we will review the use of the daily collections at the two sites to see if they offset the necessity for the remote events (see section 7 below, “Remote Household Hazardous Waste Events”).

As a part of the suite of recycling and disposal services offered to Fairfax County residents, the county’s Solid Waste Management Program operates two permanent Household Hazardous Waste collection facilities, one at the I-66 Transfer Station and the other at the I-95 complex. More information on these locations can be found on the county’s website at www.fairfaxcounty.gov/dpwes/trash/disphhw.htm or by calling a recorded 24 hour information line at 703-324-5068, but critical information is provided in Table VI-2.

What is Household Hazardous Waste?

Household hazardous waste refers to used or leftover contents of consumer products that contain materials with one of the four characteristics of a hazardous waste: toxic; ignitable; corrosive; or reactive. (See the [Virginia DEQ Household Hazardous Waste Fact Sheet](#) for more information.) Household hazardous waste should not be disposed of in the regular trash.

The Fairfax County Household Hazardous Waste Program accepts hazardous materials from residents free of charge and disposes or recycles these materials according to all local, state and federal regulations. The safest way for Fairfax County residents to dispose of household hazardous wastes is to [carefully pack them up](#) and bring them to one of the county's [Household Hazardous Waste Collection Sites](#).

Table VI-2: Household Hazardous Waste Collection Sites	
I-66 Transfer Station (Fairfax)	I-95 Landfill (Lorton)
4618 West Ox Road, Fairfax, VA 22030 703-631-1179, TTY 711	9850 Furnace Road, Lorton, VA 22079 703-690-1703, TTY 711
Trash and Recycling: Monday - Friday: 6 a.m. - 6 p.m. Saturday: 6 a.m. - 6 p.m. Sunday: 9 a.m. - 6 p.m.	Trash and Recycling: Monday - Friday: 7 a.m. - 6 p.m. Saturday: 7 a.m. - 4 p.m. Sunday: 7 a.m. - 4 p.m.
Household Hazardous Waste Now Open Every Day Monday – Saturday: 8 a.m. - 4 p.m. Sunday: 9 a.m. – 4 p.m.	Household Hazardous Waste Now Open Every Day Sunday - Saturday: 8 a.m. - 4 p.m.
<p>Both Facilities</p> <p>Holiday Schedule: 07/04/14: Independence Day - Closed 11/27/14: Thanksgiving Day - Closed 12/24/14: Christmas Eve Day - Closing at 1 p.m. 12/25/14: Christmas Day - Closed 12/31/14: New Year's Eve Day - Closing at 2 p.m. 01/01/15: New Year's Day - Closed</p> <p>All Other Holidays - Open Regular Hours</p> <p>Household Hazardous Waste Program Infoline: 703-324-5068, TTY 711</p>	

Materials Accepted at HHW Locations:

- Acids.
- Aerosol sprays.
- Algaecide.
- Batteries: Button, Rechargeable (NICAD), Mercury and Lithium Batteries are the **ONLY** household batteries accepted by this program. Rechargeable batteries may also be taken to additional [collection points](#). Dispose of Alkaline batteries in the regular trash.
- Brake fluid.
- Coal tar products.
- Cooking oil.

- Creosote products (wood sealers and wood treatment products).
- Driveway sealers.
- Floor care products.
- Fluorescent lamps, unbroken.
- Fungicides.
- Gasoline.
- Glue (solvent-base).
- Herbicides.
- Inks & dyes.
- Insecticides.
- Mercury products.
- Moth balls.
- Nail polish and nail polish remover.
- Paint (oil-base).
- Paint thinner.
- Pesticides.
- Poisons.
- Polishes.
- Pool chemicals.
- Rechargeable batteries.
- Rust removers.
- Stains.
- Varnish.
- Weed killers.
- Windshield wiper fluid.
- Wood preservers.

Materials That May be Poured Down the Drain:

- Ammonia-based cleaners.
- Most bathroom cleaners.
- Diluted, Mixed Photographic Chemicals.
- Drain cleaners.

Materials That May be Disposed in Regular Trash:

- Batteries labeled alkaline
- Empty containers of any kind
- Fertilizers/lime
- Glue (water-based only)
- Latex paints (dried)
 - Let the latex paint air dry and throw container in trash. (Tip: You may pour the paint onto newspaper. Once it dries, roll up the newspaper and dispose of it in the trash.) If you are unable to let the latex paint

dry, you may take the container to one of the [permanent household hazardous waste sites](#) or to a scheduled collection event.

- Permissible fireworks/flares (thoroughly soaked in water first).
- Shoe polish.
- Smoke alarms (remove battery first).
- Medicine - may be mixed with water, coffee grounds or kitty litter to make unusable.
- Syringes, needles and other medical sharps: Place in plastic container with screw-on top. Mark the container "residential sharps."

Other Materials NOT Accepted at HHW Locations:

- Ammunition: Call the Police non-emergency number: 703-691-2131, TTY 703-877-3715.
- Fireworks: Contact the Fire Marshal's office at 703-246-4849, TTY 711.
- Propane tanks: Common 20 pound barbecue-style propane tanks are accepted at the metal recycling area for a fee of \$3 per tank. Larger tanks must be returned to a local supplier.
- Explosives: Call the Police non-emergency number: 703-691-2131, TTY 703-877-3715.
- Radioactive materials: Call the Department of Public Safety Communications: 703-691-2131, TTY 703-877-3715.
- Compressed gas cylinders: Contact a local supplier.

Procedures for Packing and Transporting Household Hazardous Waste:

- Keep products in their original containers. Do not mix products. Make sure lids are tightly sealed. Label materials that are not in their original containers.
- Place leaking containers in a larger, plastic container with a tight-fitting lid.
- Secure products upright in cardboard box so that they do not tip over in transport. Do not transport products in plastic bags.
- Transport products in the back of a pickup truck or in a car trunk. Ensure adequate ventilation if transported in car passenger compartment.
- Keep flammables out of direct sunlight and away from sources of heat, spark, flame or ignition. Do not smoke.
- **ONLY leave waste during operating hours.**

The HHW program is one of the county's premier pollution prevention programs. The program receives its funding through the Solid Waste Management Program fees that users of the county's disposal facilities pay to properly and legally dispose of refuse in Fairfax County. Materials delivered by residents for disposal or recycling primarily consist of antifreeze, motor oil, lead acid batteries and latex paint. The Solid Waste Management Program also

hosted four remote HHW events per year in 2012-2014 as discussed in section 7 below.

In FY 2013, 28,723 users participated in the HHW program at the HHW locations, disposing of 470,775 pounds of HHW. Compared to FY 2012, this represents a 6.8 percent increase in the number of users and an 11.2 percent increase in the weight of HHW disposed. Program details are provided in Table VI-3. (11)

Table VI-3			
Fairfax County Household Hazardous Waste Program: Record of Fiscal Year Disposal			
Fiscal Year	Participation (# of users)	HHW (pounds)	Cost per household
FY 2013	28,723 households	470,775	\$23.07
FY 2012	26,889 households	423,275	\$25.30
FY 2011	21,909 households	416,110	\$25.62
FY 2010	23,110 households	350,815	\$27.11
FY 2009	19,951 households	404,896	\$32.66
FY 2008	22,112 households	452,552	\$30.59
FY 2007	21,958 households	428,064	\$27.77
FY 2006	21,471 households	440,076	\$26.32
FY 2005	22,866 households	411,315	\$18.84
FY 2004	18,600 households	373,220	\$22.92
FY 2003	16,140 households	359,840	\$23.30
FY 2002	16,272 households	368,060	\$20.97
FY 2001	15,312 households	356,275	\$18.75
FY 2000	15,564 households	330,325	\$18.33

Source: Fairfax County Department of Public Works and Environmental Services, Solid Waste Management Program.

The HHW program provides an overall community benefit, and therefore residents are not charged when they use the program. The program receives its funding through the Solid Waste Management Program tip fees. In FY 2013, materials deposited by residents for disposal or recycling primarily consisted of antifreeze, motor oil, lead acid batteries, myriad acids and pesticides and oil based paint. It is germane to note that none of these materials is regulated as hazardous waste but the county collects this material because it does produce a hazard to the environment if not properly disposed of.

The HHW program began collecting cooking oil in FY 2014 to prevent its being disposed in stormwater drains. During the initial six months, 1,425 gallon have been collected and resold. This new program provides much needed revenue to allow the county to continue expanding HHW removal from the waste stream.

It is anticipated that the amount of HHW entering the county program will increase; however, capacity is available at the existing facilities to meet county needs well into the future.

5. Commercial Hazardous Waste

In FY 2013, the Solid Waste Management Program conducted three Conditionally Exempt Small Quantity Generator waste collection events at the I-66 Transfer Station Complex. A CESQG is, according to federal hazardous waste regulations, any business that generates less than 220 pounds or 27 gallons of hazardous waste per month. The Solid Waste Management Program staff operates the event using the services of a permitted hazardous waste management contractor. The CESQGs pay a disposal fee for the hazardous material they bring to these events. This fee is generally lower than what it would cost to have a permitted hazardous waste management contractor collect and appropriately manage the waste at an individual business location. This reduces the costs for CESQG businesses in the county to comply with federal and state environmental regulations. Hazardous waste generators that generate more than the 220 pounds per month are required by federal and state laws and regulations to properly dispose of the hazardous waste that they generate. In FY 2013, 74 companies participated in the three CESQG events. Information about the CESQG program and a list of permitted hazardous waste disposal companies are available on the county's website at www.fairfaxcounty.gov/dpwes/trash/disphazcomm.htm.

The Solid Waste Management Program also spearheaded development of the Know Toxics program, managed regionally by the Northern Virginia Regional Commission staff and its Waste Management Board, www.KnowToxics.com (11). This project is a web-based tool that provides information on the types of hazardous wastes generated by businesses, their responsibilities to properly dispose of hazardous waste a permitted hazardous waste disposal facility and information on permitted hazardous waste disposal facilities.

6. Rechargeable Battery Recycling

In addition to the Solid Waste Management Program's battery collection activities described in the Solid Waste chapter of this report, the program collects rechargeable batteries that contain regulated heavy metals at its household hazardous waste facilities. Non-rechargeable household batteries are not accepted by the program and can be safely thrown away because of the Mercury-Containing and Rechargeable Battery Management Act of 1996, which required the reformulation and removal of mercury from use in the manufacture of common alkaline batteries. Nickel-Cadmium and other rechargeable batteries (commonly found in cell phones and all other hand-held electronic devices, cordless tools and appliances, cameras and toys) are also accepted by the household hazardous waste program. The program has put rechargeable

battery collection boxes at the Fairfax County Government Center and each of the Board of Supervisors' offices, and the program staff collects these batteries on a routine basis. A complete listing of collection locations is on the county website at: <http://www.fairfaxcounty.gov/dpwes/recycling/mat-bat.htm>.

Additionally, any person, business or other entity can use the services of Call2Recycle.org. This is an industry-funded product stewardship initiative through which the manufacturer of a product known to contain hazardous constituents pays for the collection and appropriate disposal of the item at the end of its useful life. Program users sign up on-line, and they will receive a cardboard box with a prepaid shipping label. The user fills the box with rechargeable batteries after the batteries are placed into individual plastic bags (to prevent arcing and potential fires in shipping). The user calls for pickup by UPS, which will send the container to a permitted hazardous waste disposal facility, as previously stated, at no charge to the user. The Solid Waste Management Program strongly encourages users of rechargeable batteries to use this free program to responsibly manage their batteries.

7. Remote Household Hazardous Waste Events

As an adjunct to the permanent household hazardous waste facilities, and as described in the Solid Waste chapter of this report, the Solid Waste Management Program has supported remote HHW program in 2012, 2013 and 2014, with four events per year scheduled and paid for by the Solid Waste Management Program. Similarly, three hazardous waste collection events targeted for businesses were also conducted. Remote collection events for 2014 were held from 9 a.m. - 2 p.m. on the following dates:

- Saturday, March 15 - South County Government Center, 8350 Richmond Highway, Alexandria.
- Saturday, April 26 - Reston South Park & Ride Lot located at the intersection of Lawyers Road and Fox Mill Road in Reston.
- Saturday, May 17 - Mason Governmental Center, 6507 Columbia Pike, Annandale.
- Saturday, September 6 - McLean Community Center, 1234 Ingleside Ave, McLean.

As discussed in section 4 above, although successful remote collection events were conducted quarterly in 2012 through 2014, they are not planned for 2015 because of the expansion of collection of HHW every day at the I-66 Transfer Station in Fairfax and the I-95 Landfill in Lorton. This is a concern to EQAC because the remote collection events target a different customer engagement. EQAC will review the use of the daily collections at the two sites to see if they offset the necessity for the remote events.

8. Fluorescent Lights

Americans bought 290 million compact fluorescent light bulbs in 2007--this information comes from the Association of Electrical and Medical Imaging Equipment Manufacturers' website, and the same statistics are still there. That's 20 percent of all light bulbs sold in the United States and almost double the sales from a year earlier. (13) Compact fluorescent light bulbs have become popular for residential use due their energy savings potential. The incandescent light bulbs are being phased out and are no longer being sold. (10) However, the compact fluorescent light bulbs contain minute quantities of mercury, which classify them as household hazardous wastes when they are disposed. These types of lights are accepted from residents for proper disposal at both of the county's HHW facilities. Fluorescent lights are also collected during Electric Sunday events.

Small businesses that generate less than the regulated quantity of fluorescent lights may bring them to the business hazardous waste collection events. Other larger businesses that generate regulated quantities of these materials must comply with federal and state regulations regarding their proper disposal or recycling of the lights (11).

The following Fluorescent Bulb Reference Guide has been taken from a website from the Northern Virginia Regional Commission's and Northern Virginia Waste Management Board's "KnowToxics" campaign. (15)

Fluorescent Bulb Reference Guide

- Any bulb with the  symbol **cannot** be disposed of in the trash.
- These bulbs contain mercury and must be reclaimed or recycled through an appropriate facility.
- The following table shows a sample of typical fluorescent and High Intensity Discharge bulbs that contain mercury and the names often used for them:

Type of Bulb	What it might look like...
Fluorescent tubes: This includes 4-footers, 8-footers, T-12s, and T-8s	
Low mercury "green tips"	

High intensity discharge (HID)	
Compact fluorescents	
Neon	
U-tubes	
Circulars	

Mercury vapor	
High pressure sodium	
Low pressure sodium	
Ultraviolet	
Electronic Ballasts	

A brochure about the value of using fluorescent lights and how to recycle them is available on Fairfax County's website. The website also refers the consumer to an EPA website (at <http://www2.epa.gov/cfl>) for instructions on procedures for disposing of fluorescent light bulbs that have been broken. Of course the most desired method of disposing of fluorescent light bulbs is to take them on any day of the week to the HHW disposal sites discussed above in section 4. Also several stores, including Home Depot stores in Fairfax County, will take compact fluorescent light bulbs from all consumers and dispose of them safely and responsibly.

9. Pre-Disaster Recovery Plan

Much of the following discussion has been taken from a county website addressing the development of a Fairfax County Pre-Disaster Recovery Plan (<http://www.fairfaxcounty.gov/oem/pdrp/>).

Fairfax County is susceptible to a variety of natural hazards, including floods, hurricanes and tornadoes, as well as man-made hazards such as terrorist acts and accidental releases of hazardous materials. Some of these events have the capacity for catastrophic local and regional impacts. Following a major disaster, complex issues with impacts far beyond county government will arise. The local economy may falter due to supply-chain disruptions, infrastructure failures, business closures and/or inaccessible work-places. There will likely be population displacement, housing shortages and rebuilding issues and potential social and psychological impacts. While the effects of disasters are wide ranging and cannot be predicted, pre-event planning can position Fairfax County to recover from a major incident. Methodical, thoughtful pre-event planning can establish priorities, decision-making structures and procedures and recovery goals. These can focus and accelerate the recovery process during the stressful and often fraught post-disaster period.

A Pre-Disaster Recovery Plan will provide Fairfax County with a single reference for guiding policy and action during recovery from a significant natural or human-caused disaster. The plan will allow the government to support the private and nonprofit sectors as the community works together to restore the economic base, neighborhoods, social fabric and other elements over the long-term.

A draft Fairfax County Pre-Disaster Recovery Plan was released for public review and comment in November 2011. Included in the plan was an organizational structure and identification of roles and processes for a recovery agency. Several Recovery Support Function branches were identified within this structure, including a Natural and Cultural Resources RSF Branch. The PDRP outlines the structure of this branch as well as anticipated pre-disaster planning activities.

In January 2012, the Board of Supervisors endorsed a final Pre-Disaster Recovery Plan, and the plan was tested through a table-top exercise in February 2012. Approximately 85 people participated in this exercise; participants included representatives of county agencies, local nonprofit organizations and the Virginia Department of Emergency Management. An After-Action Report/Improvement Plan is available for review at <http://www.fairfaxcounty.gov/oem/pdrp/ffx-pdrp-ttx-feb10-2012.pdf>.

C. REPORTING ENVIRONMENTAL CONCERNS AND ISSUES

Environmental issues affect everyone living and working in the county. All environmental concerns and events negatively impacting the county should be reported. In past years, this chapter presented a list of contact information relating to environmental crimes. This list has been removed from this chapter and is now presented in the introductory section of this report, after the presentation of the “Scorecard.”

D. LEGISLATIVE UPDATE

None

E. STEWARDSHIP

What is considered to be hazardous materials has changed in recent decades. Formerly, hazardous materials were primarily associated with industrial releases or transportation of chemicals. Hazardous material then came to include terrorist attacks, some household chemicals used for cleaning and chemicals used for yard work. Now, hazardous material includes items that individuals use in everyday life, such as rechargeable batteries for cell phones and power tools, as well as the compact fluorescent light bulb. Proper management of discarded electronics has become an area of increasing concern. In response to this concern, the county implemented the Electric Sunday program and has diverted significant quantities of electronics from disposal to recycling. Stewardship for the storage, use of, and disposal of hazardous materials is no longer solely an industry issue; it now belongs to individuals, and with more than a million individuals in Fairfax County, household hazardous waste volumes will continue to increase.

F. COMMENT

1. EQAC has long advocated for expanded collection capability at permanent and remote sites for the growing availability of household hazardous waste collection. Expanded collection of the previous monthly Electric Sunday program to an every-day service at the two permanent collection sites is very commendable. Remote collection events were conducted quarterly in 2012 through 2014, but they are not planned for 2015. This is a concern to EQAC because the remote collection events target a different customer engagement, but we will review the use of the daily collections at the two sites to see if they offset the necessity for the remote events.

G. RECOMMENDATION

None.

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