

**TOWN OF EMMITSBURG
2016-2017
MUNICIPAL SEPARATE STORM
SEWER SYSTEMS (MS-4)
REPORT**

**Submitted
December 18, 2017**

**Town of Emmitsburg
300A So. Seton Avenue
Emmitsburg, MD 21727
301-600-6300
www.emmitsburgmd.gov**

**TOWN OF EMMITSBURG
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT REPORT – ACTIVITY FROM JANUARY 1, 2016 – DECEMBER 31, 2017**

The Town of Emmitsburg has undertaken a variety of activities relative to its Notice of Intent (NOI) for the NPDES General Permit established in 2003, as of December 31, 2017. This report is divided into sections separated by tabbed dividers, which summarize activity on the six minimum control measures, plus additional related activities. Supporting documentation is included within each tabbed section.

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit discharge Detection and Elimination (IDDE)
4. Construction site Stormwater Runoff Control
5. Post Construction Management
6. Pollution Prevention and Good Housekeeping

Supplemental information describing training, meetings, and future plans is found in Section 7.

SECTION 1

PUBLIC EDUCATION AND OUTREACH

1. Public Education and Outreach

The Emmitsburg Comprehensive Plan Update effort, took place beginning in early 2015, and culminated in November 2015. The Plan includes information regarding the Chesapeake Bay Watershed, stream corridor buffers, state stream assessments, and the responsibility of the Town to help upgrade water quality. The draft Plan was available on various media, and town meetings considering the Plan were broadcast via the local cable station. The Plan was adopted on November 16, 2015, and includes background materials and goals relative to water quality improvement. The 2015 Comprehensive Plan may be viewed on the town website www.emmitsburgmd.gov Sections 9, 10, and 11, in particular, address the town's goals and accomplishments relative to water quality and other environmental issues.

Town-generated informative inserts on water conservation and topics such as keeping grease out of the sewer system have been placed in quarterly water bills in past years. The bills are mailed to 1125 current customers. The insert has evolved to a 2-page (2-sided of course) newsletter with a variety of topics of interest within the town. The next water bill will go out on December 28, 2017, and the newsletter will contain information about the MS-4 permit program, riparian buffers, and sidewalk de-icers. Monocacy-Catoctin Watershed Alliance green life-style brochures (provided by Frederick County Watershed office) are available in our literature rack. Copies of the literature and inserts are attached at the end of Section 1.

Signage educating the public about existing reforestation projects and new plantings has been purchased and will be installed in the Emmitt Gardens reforestation area. There was vandalism in the Summer 2017 involving the cutting down of 5 trees that were planted in 2007. There have also been neighboring property owners mowing the reforestation area, so a combination of signage and other educational efforts via our website and billing inserts will be utilized to stem this activity.

The Town will maintain contact information on our website for organizations and agencies involved in stormwater management, the Chesapeake Bay, and general water quality. These would include Frederick County Office of Sustainability, MD Dept. of the Environment, Chesapeake Bay Foundation, Interstate Commission on the Potomac River Basin, etc.

At the Town Board meeting on November 6, 2017, the Town Planner presented a powerpoint describing the purpose of the MS-4 program, Emmitsburg requirements and history, examples of current compliance and future projects, including the types of mitigation likely to be attainable for the Town. (Copy attached, Section 1.)



Reforestation Project

Caution!
This Area Contains
New Trees.
Please Help Us Protect
And Care For This
Young Forest.

Trees For Your Future.

804-218-1111

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STREAMSIDE FOREST BUFFER

THIS FOREST BUFFER IS BEING
MAINTAINED TO PROTECT WATER QUALITY
AND WILDLIFE HABITAT ALONG THIS STREAM
THAT FLOWS INTO THE CHESAPEAKE BAY.

NO MOWING OR GRAZING.

*Trees and Clean Water
For Your Future*

Chesapeake Bay Drainage

STYLE 24



BUILDING A

GREENER LIFESTYLE

FOR FREDERICK COUNTY

Maintaining your Lawn while Protecting Water Quality

LAWN FACTS

Lawnmowers and air pollution.

One hour of pushing a new, gas-powered lawn mower around your yard produces about the same amount of pollutant emissions as driving your car for 50–70 miles. By some estimates, up to five percent of summer hydrocarbon emissions in suburban areas are due to lawnmower emissions.

Lawns are not Sponges.

Most lawn soils are extremely compacted, and recent research indicates that about half of all rainstorms produce at least some runoff from lawns. So, be careful what you put into your lawn—there's a good chance it may end up in the nearest stream, creek and the Chesapeake Bay!

Polluting Streams

The most comprehensive national pesticide monitoring study to date, conducted by the US Geological Survey, detected higher levels of insecticides in urban streams than in those in agricultural areas.

A Labor of Love

In Maryland alone, homeowners spend an estimated 72 million hours collectively each year on lawn care.

Turf Nation

According to industry estimates, there are more than 50 million acres of managed turf in the US. By comparison, the total watershed area of the Chesapeake Bay is just over 40 million acres.

Lawns that are as hard as a rock.

Several studies have shown that about a third of all lawns are so highly compacted during the construction process that they have the same hydrologic properties as concrete.

The DDT Legacy

Despite being banned more than 20 years ago, researchers routinely find low levels of the chemicals DDT and DDE in urban stormwater and sediment samples in our region. The legacies of these persistent pesticides are a sobering reminder that small actions can have long-term consequences.

IS GREEN GRASS REALLY GREEN?

Most of us have childhood memories of running barefoot through the grass. In mid-Maryland, the growing season for turf grass is close to 200 days—lots of time for running through the grass!

According to a study by the Center for Watershed Protection in Ellicott City, Maryland, nearly 90% of residents in the

Chesapeake Bay Watershed have a lawn, and the amount of turf that is



Is this your lawn? Is there an alternative? What's wrong with this picture?

fertilized in the Bay Watershed is equivalent to 800,000 football fields. In Maryland, the area devoted to managed turf or lawns consume more land area than corn, soybeans, and wheat combined!

Is your lawn a healthy, diverse green ecosystem, pleasant to the eye with low cost, ecologically sound maintenance or an economic and environmental liability from overfertilizing and overwatering?

Estimated Distribution of Turf Grass by Sector in the Chesapeake Bay Watershed (courtesy Center for Watershed protection)

<u>Sector</u>	<u>%</u>
Home Lawns	70%
Roadside Right-of-Way	10%
Municipal Open Space	7%
Parks	4%
Schools	3%
Golf Courses	3%
Churches	2%
Cemeteries	1%
Others (e.g., airports, sod farms)	1%

RESOURCES

• Backyard Actions for a Cleaner Chesapeake Bay:

www.mda.state.md.us,

www.hgic.umd.edu

• Healthy Habits for Clean Water:

<http://www.epa.gov/npdes/stormwater>

• Environmental Lawn Care - Grasscycling:

www.grasscycling.askdep.com

• Envirocast: Weather and Watershed Newsletter.

The Grass Crop of the Chesapeake Bay Watershed

www.stormcenter.com/envirocast/2003-05-01/envirocast.php

• Reducing Turf

Grow It! Don't Mow It. Wild Ones Website.
www.for-wild.org

LAWN CARE TIPS

The choices we make in maintaining our lawns can make a real difference in the health of our streams, rivers, and the Chesapeake Bay. Read-on to consider some easy tips to simplify lawn care and protect our water resources:

- **Keep the fertilizer spreader in the garage this summer.**

Unless you plan to have livestock grazing on your lawn, you simply don't need to fertilize your grass every year. Many people never fertilize and still have green lawns. Have your soil tested to determine the type and amount of fertilizer or other soil amendments needed for a healthy lawn. Fertilize in the fall, not springtime, using slow release forms of nitrogen. Aerate your soil to reduce compaction and help lessen fertilizer run-off from your lawn. Fertilizers and pesticides, when improperly applied to lawns, can enter and pollute waterways.

- **Measure your yard.**

Most lawn care product application rates are based on 1,000 square feet. Do you really know how big your yard is? Take an afternoon to recline on your patio or deck and visualize 1,000 square feet (think of a square ten paces by ten paces). The most common reason why folks over-fertilize is that they over-estimate the size of their yard when buying and using lawn care products (several regional lawn experts now recommend that great lawn results can be achieved with as little as 10 pounds of nitrogen per 1,000 square feet per year—something not reflected in current product packaging).

- **Check the weather forecast before you fertilize or spray.**

If rain is expected within the next 24 hours, delay application until the next dry period.

- **Never apply herbicides or insecticides within 5 feet of pavement.**

If you must remove weeds near pavement, simply pull them by hand. Also make sure to rinse out applicators away from paved areas too. A recent California study showed that lethal insecticide levels in one small urban stream were caused by a half-dozen homes that failed to follow these simple rules. Don't leave fertilizer on sidewalks or driveways where it can be washed into the nearest stream.

- **Be a careful consumer.**

Read all product labels carefully. If the product has too many warnings on the label, consider replacing it with a safer alternative. Consider

these less toxic insecticides: insecticidal soaps, pyrethrum, rotenone and neem, horticultural oils, B.t. (*Bacillus thuringiensis*). The following natural fertilizers contain relatively low concentrations of nutrients, but add valuable organic matter to soil: cottonseed meal, blood meal, bone meal, fish emulsion, and manure.

- **Don't overwater the lawn.**

Established lawns will survive a few weeks without rain. Watering by hand or light, frequent water applications will make roots reach the soil surface for moisture, causing thatch and promoting weed growth. An abundance of water results in excessive leaf growth, depleting a lawn's natural energy reserves and weakening its disease resistance. Artificially high moisture and surface humidity can spread and foster disease pathogens. Cool weather grasses, like ryegrass or Kentucky bluegrass and some fescues go dormant and brown in the hot summer months and should not be watered. Grass is not always the best choice for steep slopes, shady areas, or walkways—consider native groundcover landscaping.

- **Mow Higher and Less Frequently.**

You can control weeds by shading them out. Set your mower height to three inches and you will have both a healthier lawn and fewer weeds. Experts caution that cutting grass too short is the second leading cause of problem lawns.

- **Don't Bother with Herbicides; you really can't win.**

An average acre of soil contains more than 200 million 'weed' seeds in the top six inches of soil, which germinate under the right moisture, light, and temperature conditions. Indeed, when you turn over grass and expose the underlying soil, about five percent of these seeds can germinate, or about 250 weeds per square foot. Don't get involved in a battle you can't win, and remember that the naked eye generally cannot distinguish between a perfect lawn and one containing at least a few weeds.

- **Honey, I shrunk the lawn!**

A great way to save time and energy is to reduce the turf area on your property by about 5 percent each year. Start with the soggy and/or steep areas that are difficult to mow. Dig out the lawn and replace it with flower and shrub beds. There are many attractive ways to do this. Place 3–4 inches of mulch and plant some container-grown plants.

- **Select a Good Natural Lawn Company.**

About 25% of us use the services of a lawn care company to take care of our yards. While it is nice to have somebody else to do the sweating, a good slacker should insist on a company that uses organic fertilizers and natural pest management techniques. Although just about every lawn care company has the word 'green' in its name, this doesn't necessarily mean that it practices environmentally-responsible lawn care. Before you sign a contract, check them out to see if they use natural or organic methods and conduct a soil test. Make sure the firm and its personnel are licensed and certified by the Maryland Department of Agriculture's Pesticide Regulation Section.



Community Commons



The Building a Greener Lifestyle series is a public outreach component of the Monocacy and Catoctin Watershed Alliance (MCWA), an alliance of diverse stakeholders interested in improving water quality and wildlife habitat in the Monocacy and Catoctin Watersheds. Community Commons and Frederick County Government developed the series to empower citizens. More information about the MCWA and Frederick County Government can be found at 301.694.1413 or at www.co.frederick.md.us/cleanstreams. More information about the Greener Lifestyle series and about Community Commons can be found at 301.662.3000 or at www.communitycommons.org.



BUILDING A

GREENER LIFESTYLE

FOR FREDERICK COUNTY

Natural Household Cleaners

FOR MORE RECIPES

Internet:

- **Boulder County Recycling webpage**
<http://www.ecocycle.org/hazwaste/recipes.cfm>
- **Children's Health Environmental Coalition**
<http://www.checnet.org/healthhouse/education/>
- **Los Angeles County Department of Public Works**
<http://ladpw.org/epd/hhw>

Books:

- **Clean House, Clean Planet**
by Karen Logan
- **The Green Kitchen Handbook**
by Annie Berthold-Bon
- **Home Safe Home**
by Debra Dadd-Redalia

SUPPLIES

- **Gaiam**
www.Gaiam.com
Carries 7th Generation products, available in bulk quantities, 877-989-6321
- **Green Home**
www.greenhome.com
Has a wide selection of cleaning products, 877-282-6400

REFERENCES

- **Household Products Database**
<http://hpd.nlm.nih.gov/products.htm>
National Institutes of Health, National Library of Medicine
Search the database for household products to find out what is in them and their potential health effects.
- **The Consumer Union Guide to Environmental Labels**
www.eco-labels.org
This site is where to go if you are ever confused about terms used in advertising or on a label. What do "biodegradable" and "earth smart" mean? And who regulates these claims? This site can answer these questions.

NATURAL HOUSEHOLD CLEANERS



Common household products such as castile soap, baking soda, vinegar, and lemon can make powerful natural household cleaners.

Cleaners can be classified as more or less environmentally preferable. At the high end (preferable) would be products that are almost entirely vegetable derived, perhaps with some mineral content. At the low end (not preferable) are products that are entirely petroleum derived, do not readily biodegrade, and contain highly toxic or carcinogenic components. In the middle are products that are petroleum based and are biodegradable and less toxic, as well as cleaners that contain both plant and petroleum components.

Conventional cleaners are among the most dangerous chemicals found in the home, but these

chemicals are not always listed on the labels. The Consumer Product Safety Commission regulates the labeling of products. Many cleaners contain known carcinogens (cancer-causing substances), endocrine disruptors (cause reproductive illnesses), and some emit large doses of VOCs (volatile organic compounds) that contribute to smog.

When possible, use non-toxic products to clean your home. Many of these products are just as effective as their chemical counterparts, are safer to use, and less expensive. One way to ensure you are using safe cleaners is to make your own using natural ingredients.

Basic ingredients include baking soda, castile soap, vinegar, and water. Essential oils provide pleasant smells and may make a dirty job more enjoyable.

- Baking Soda (sodium bicarbonate) works as a deodorizer and mild abrasive. It is non-toxic to humans, inexpensive, and versatile.
- Castile soap removes dirt by dissolving oils that bind dirt to surfaces. Soaps made from vegetable sources are better for the environment than those made from petroleum sources; they biodegrade more quickly and come from a renewable resource.
- White, distilled vinegar (acetic acid) is a powerful deodorizer that repels grease, can help prevent mold and mildew, and dissolves soap film and mineral deposits. Choose vinegar made from vegetable sources.
- Borax cleans and deodorizes. It is an excellent disinfectant, and softens water. Borax can usually be found with laundry products in grocery stores.

TO CLEAN OR DEODORIZE...	TRY...
Windows and windshields	Club soda
Tubs, sinks, and toilet	Paste of baking soda, castille soap, and water
Open and clean sink and tub drains	Mix 1/4 cup vinegar and baking soda. Let stand a few minutes and rinse with boiling water.
Silverware, candlesticks, etc.	Paste of baking soda and water, or toothpaste
Mildew	Mix 1/2 cup vinegar with 1/2 cup borax in warm water. Apply with a sponge or spray bottle.
Garbage disposal	Grind ice or citrus peels in disposal.
Ceramic tiles	Mix 1/4 cup vinegar with 1/2 gallon hot water.
Carpet Odor	Sprinkle carpet with baking soda, cornmeal, or cornstarch. Allow to sit 1/2 hour and vacuum up.

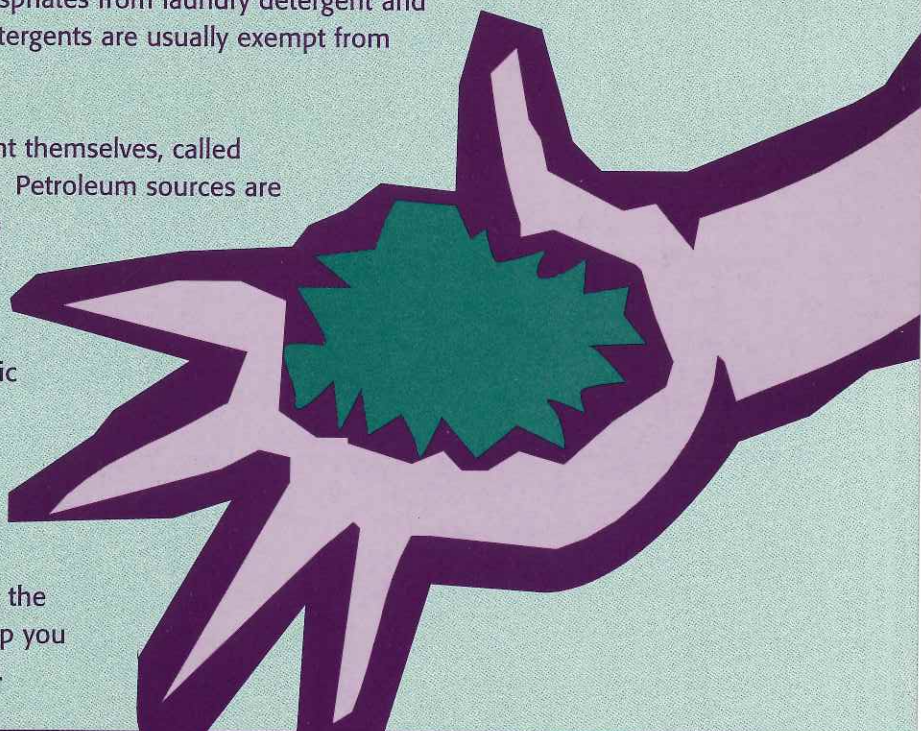
ENVIRONMENTAL IMPACTS OF CONVENTIONAL CLEANERS

Phosphates are minerals that act as water softeners. They can be very effective cleaners, but also act as fertilizers. When cleaning products are washed down the drain, phosphates enter waterways and cause rapid growth of algae, polluting the water. Many states have banned phosphates from laundry detergent and other cleaning products. Automatic dishwasher detergents are usually exempt from these restrictions.

The key ingredient in many cleaners is the detergent themselves, called surfactants. Most surfactants are petroleum based. Petroleum sources are a limited resource and their extraction often causes pollution.

Responsible use of bleach means minimal use. If needed for disinfection, clean first with a non-toxic product and follow-up disinfection with bleach.

It is important to determine the life cycle of a product before purchase. Ask questions about the manufacturing process, packaging, shipping, performance, and resource recovery (can you reuse the package?). The answers to these questions will help you determine if the product is environmentally friendly.



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IMPORTANT NOTE! Before setting up a rain barrel, **BE SURE** you will be in compliance with all applicable laws, rules and ordinances pertaining to collecting and storing rainwater. If your town or subdivision does not allow rain barrels, work closely with elected officials or the homeowner's association to address concerns and, hopefully, shape a new conservation policy! It is easy to screen rain barrels from view using plant material, lattice or fencing. When drafting guidelines for use, be sure to prohibit collection of rain water in an unsafe container that poses a drowning and mosquito hazard.

RAIN BARREL PRIMER: SAFETY



Even the best conservation practice is not worth implementing if it cannot be done safely. Keep these simple safety tips in mind:

- Situate the barrel on a firm, level foundation. A 60-gallon rain barrel weighs at least 500 pounds when full, and poses a tipping hazard when placed on a soft, unlevel surface.
- Secure the barrel to prevent tipping.
- Never use an open container to collect and store rainwater. Open containers pose a drowning hazard for humans and animals.
- Always screen a rain barrel to discourage mosquitoes from breeding and spreading West Nile Virus.

- Heavy rains may cause the barrel intake to exceed overflow capacity. Monitor the water level in the barrel and return the downspout to normal function when barrel is full.
- Collected rainwater is not intended for human or animal consumption.
- Make sure overflow points away from the foundation of the building to minimize any risk of property damage.

RAIN BARREL PRIMER: YIELD FORMULA

It is amazing how little rainfall it takes to fill a 60-gallon rain barrel.

Rainfall yield formula:

One inch of rain falling on 1000 square feet yields approximately
623 gallons of water!

Rain falling on a 750-square-foot section of roof will fill a 60-gallon barrel with only
1/8-inch of rain.

It does not take a large roof or a lot of rainfall to add up to big savings.

Save treated or well water for drinking or bathing. With no dissolved minerals or chemicals, rainwater is the best water source for plants...and it is free!

USAGE TIP...
Elevate the barrel slightly to increase water pressure and improve access to the spigot

RESOURCES:

For more information, contact

- **ICPRB**
Communications Staff
Interstate Commission on the Potomac River Basin

51 Monroe St, Suite PE-08
Rockville, MD 20850
301-984-1908
www.potomacriver.org



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BUILDING A GREENER LIFESTYLE FOR FREDERICK COUNTY

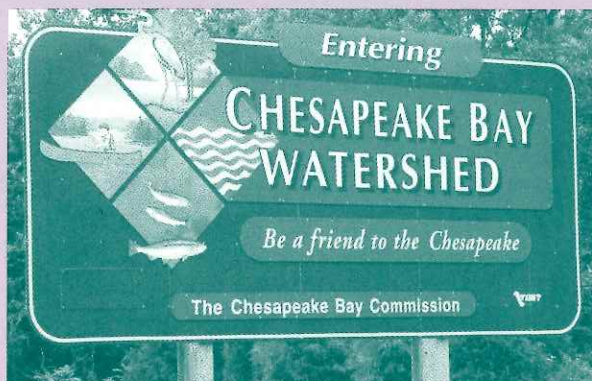
Harvesting Rainwater using Rain Barrels

WATER: A LIMITED NATURAL RESOURCE

In 2002, Maryland was in a severe drought. Groundwater levels dropped, streams dried up, and the Monocacy River experienced record low flows. Area residents were faced with water restrictions and bans on outdoor use. The City of Frederick even had an emergency plan to buy water and haul it to residents if the drought continued and the City's water supplies became further reduced. Water conservation became a top issue in the media and a frequent discussion topic as more people realized the full magnitude of our finite water supply.

A concept that gained notoriety during this difficult time was using a rain barrel to harvest and reuse rainwater for landscape purposes. A 4,000-year-old practice widely used in less-developed countries, collecting rain in a barrel is an easy and sound way to extend water resources. Besides, where landscaping is concerned, plants prefer natural rain water to either treated or well water.

Since 2002, the weather pendulum has swung to the other extreme. Rainfall has been abundant, and the worry has shifted from drought to flooding.



Hard, impervious surfaces like roofs, parking lots, and roadways act as funnels, turning life-giving rain into damaging stormwater runoff. As it flows, stormwater picks up pollutants, including fertilizer, chemicals, grease, gasoline, and silt, and dumps them into streams, rivers, and the Chesapeake Bay. Stormwater is also responsible for erosion and the resulting loss of habitat for plants, aquatic life, and animals.

While a rain barrel is a great tool to use during a drought, it can also help during times of abundant rainfall. Businesses and homeowners

who use rain barrels to catch the water from their roofs can stem the tide of stormwater before it begins! Captured rainwater can be stored and used to supply plants between rainfall events, or channeled into rain gardens where it can seep into the ground instead of running off. We all live in a watershed and should manage our property as though the Chesapeake Bay was at the end of our driveway. In a way, it is!

Too much rain? Not enough? Rain barrels are a good solution in either case!

WATERWISE LANDSCAPE MANAGEMENT

Plants, flowers, and trees add beauty to our yards, nourish our being, and reinforce our connection to the natural world. With a little care and planning, we can manage water resources in the garden to benefit both our plants and the environment.

Seven steps to a water-wise landscape:

- Improve soil quality and structure (enrich with organic matter).
- Select native and/or drought tolerant plants.
- Group plants with similar water needs.
- Use mulch to help the soil retain moisture.
- Practice good watering habits (water deeply and early in the day).
- Collect and reuse "gray water" from the bathtub, laundry or kitchen.
- Capture and store rainwater to use during dry weather.

RAIN BARREL PRIMER: SELECTION

Not all rain barrels are created equal, and it pays to know what features to consider when either making your own rain barrel or purchasing one that is ready-made.

A rain barrel should be made of a dark, UV-stable material that will not allow sunlight to reach the collected water. Sunlight plus water equals algae! While not harmful to plants, algae is unsightly and will clog the spigot. UV-stable material will extend the life of a rain barrel exposed to long periods of direct sunlight.

Select a barrel that is made of non-toxic material. ***Never purchase or construct a rain barrel unless you are absolutely certain of the history of the container used.***

Never use a plastic trash can as a rain barrel. Even good quality trash cans can warp and split from the weight of collected water. Trash cans are also difficult to make child-safe and mosquito-proof.

A well-designed rain barrel will feature a large overflow to help manage excess water once the barrel is full and during periods of heavy rainfall. An overflow the size of a garden hose is too small to handle heavy rainfall rates typical of the eastern U.S.

Look for a rain barrel that can be easily linked to additional barrels to double or even triple storage capacity.

The barrel should have a rigid lid that is fully screened and securely fastened. The lid should be designed to minimize the drowning risk for humans or animals. It should use screen to keep debris and mosquitoes out of the captured water.

The barrel's spigot should be made of high-quality metal— NEVER plastic— and should be located at the bottom of the barrel so that all of the captured water can be accessed.

Rain barrels should not be constructed using adhesives or sealants because they will eventually fail and leak. These problems are often difficult or impossible to repair and result in a barrel destined for the landfill.



BUILDING A

GREENER LIFESTYLE

FOR FREDERICK COUNTY

Composting: *Do the Rot Thing*

RESOURCES:

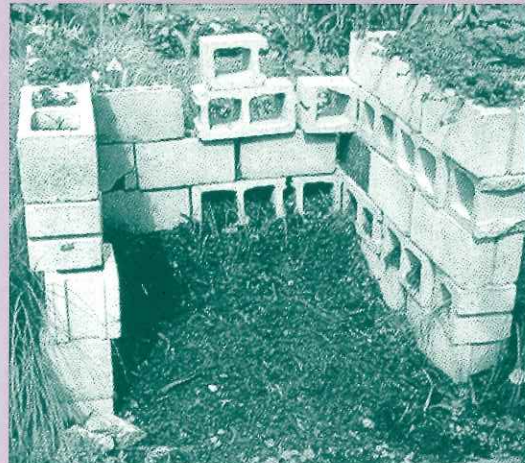
- **Frederick County Government Office of Recycling**
9031 Reichs Ford Road
Frederick, MD 21701
301-694-1848, 301-696-2960
www.co.frederick.md.us/Recycling/
- **Demonstration Center at the Frederick County Landfill**
- **United States Environmental Protection Agency**
www.epa.gov
1-800-490-9198
- **City of Toronto**
has a comprehensive composting website at www.city.toronto.on.ca/compost/index.htm

WHY COMPOST?

Composting food and yard scraps is a great way to make inexpensive, high quality fertilizer for lawn and garden. It also reduces the volume of the garbage stream entering our municipal waste facilities.

In 2001, US residents, institutions, and businesses produced more than 229 million tons of garbage. That amounts to about 4.4 pounds per person per day (up from 2.7 pounds per person per day in 1960)! Of this, 12.2 percent was yard trimmings and 11.4 percent was food scraps. **That's almost 25 percent of landfill mass that could be composted.**

Adding compost to soil improves the structure, texture, and aeration. Plants grown in compost are stronger and more resistant to disease and insects and, therefore, require less insecticide. Healthy soil absorbs and filters runoff, protecting streams from erosion and pollution.



A simple compost bin made of cement blocks.

COMPOSTING METHODS

If possible, locate the compost pile in a partially shaded spot. Choose a site that is convenient - has easy access from the kitchen, good drainage, and available water. When building a pile, start with a brown layer (see chart on page two). Always bury food scraps in the pile or top them with another compostable material.

• Heap

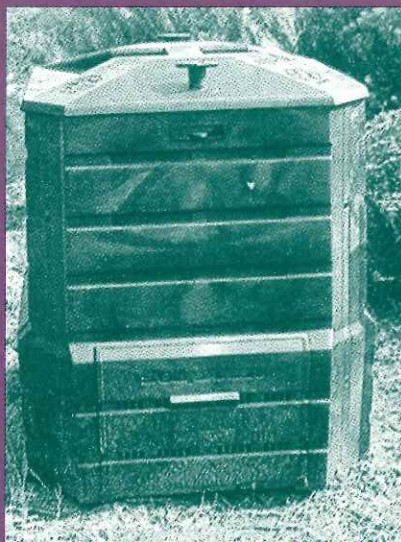
The simplest method of composting is to pile the materials on top of each other directly on the ground.

• Bin

The ideal size for a compost bin is 1 cubic yard (3 x 3 x 3 feet). Wood bins can be made from four used shipping pallets that are tied together with wire. A fifth pallet can be used as a floor to provide better air circulation to the pile.

A wire bin can easily be made from making a circular loop out of fencing or chicken wire. Simply pick up the bin and allow the compost to fall through the open bottom. Place the bin next to its last location and fork the top of the pile into the bottom of the new location.

There are also several types of composting bins and tumblers commercially available.



Commercially available bins are easy to set up.

ELEMENTS OF COMPOST

Raw Material

OK	NO
<ul style="list-style-type: none"> • Fruit and vegetable scraps • Egg shells • Coffee grounds and filters • Tea bags • Leaves • Grass • Yard clippings • Lint • Fresh garden trimmings, flowers, and plant leaves • Barnyard manure (horse, cow, chicken) • Shredded paper, cardboard, paper towels, napkins or tissues 	<ul style="list-style-type: none"> • Meat • Dairy products • Oil or grease • Pet waste • Fish scraps • Diseased plants • Bones • Sawdust from plywood, treated or painted wood • Clippings recently treated with herbicides or pesticides • Insect-infested plants • Cooked vegetables and fruit
Browns (Carbon)	Greens (Nitrogen)
<ul style="list-style-type: none"> • Leaves • Straw • Woody Materials 	<ul style="list-style-type: none"> • Grass • Food Scraps



This attractive bin allows air to flow through the pile and easy access with a hinged door.

An equal amount of greens and browns should keep a compost pile in balance. Too many greens will produce a smelly, soggy mess, while too many browns will take a long time to decompose.

Compost piles should be as damp as a wrung-out sponge. Piles may need to be sprinkled with water occasionally during the summer. They may need to be covered with a tarp if there are extended periods of wet weather.

For quicker composting, aerate the pile every two to three weeks by turning with a pitchfork or poking holes in the pile with a broom handle.

Compost is ready to use when the raw materials are no longer visible. Finished compost is dark brown and has an earthy smell. The bottom of the pile may be ready before the top.

MICRO- AND MACRO- ORGANISMS

Macroorganisms include earthworms, sow bugs, and other insects. Microorganisms include bacteria, fungi, and enzymes. These elements will come to your pile naturally as long as the pile is not located on concrete or a paved surface. Place your bin on the ground so organisms can colonize the compost pile.

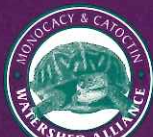
DID YOU KNOW....

More than 67 percent of the municipal solid waste produced in the United States (including paper) is compostable material.

-US EPA



Community Commons



The Building a Greener Lifestyle series is a public outreach component of the Monocacy And Catocin Watershed Alliance (MCWA), an alliance of diverse stakeholders interested in improving water quality and wildlife habitat in the Monocacy and Catocin Watersheds. Community Commons and Frederick County Government developed the series to empower citizens. More information about the MCWA and Frederick County Government can be found at 301.694.1413 or at www.co.frederick.md.us/cleanstreams. More information about the Greener Lifestyle series and about Community Commons can be found at 301.662.3000 or at www.communitycommons.org.

Monocacy & Catoclin

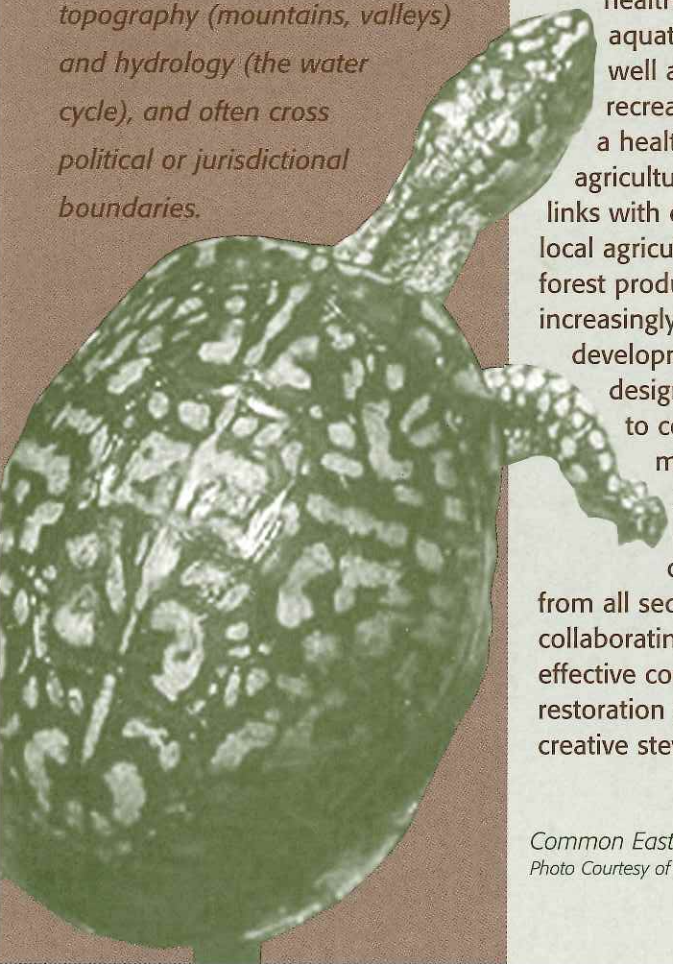


Watershed Alliance

WWW.WATERSHED-ALLIANCE.COM

WHAT IS A WATERSHED?

A watershed is an area of land that drains to a specific body of water – a stream, river, lake, bay, or wetland. It can be as small as a backyard or as large as the entire Chesapeake Bay watershed, 64,000 square miles, including parts of Maryland, Delaware, Virginia, West Virginia, Pennsylvania, the District of Columbia and New York. Watersheds are defined by natural topography (mountains, valleys) and hydrology (the water cycle), and often cross political or jurisdictional boundaries.



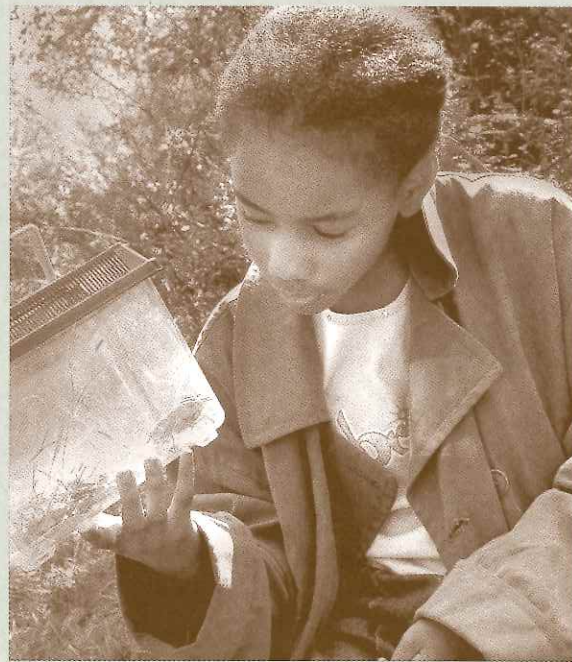
MISSION STATEMENT

The Monocacy & Catoclin Watershed Alliance coordinates the efforts of a diverse group of stakeholders dedicated to the protection and restoration of the natural resources in the Monocacy & Catoclin watersheds.

VISION STATEMENT

We envision a broadening and deepening stewardship ethic among an informed citizenry, which will help protect the County's agricultural heritage and rural character, maintain and improve the quality of life, protect and treasure our natural resources, and manage future growth more wisely. We envision healthy streams and rivers with forested buffers supplying clean drinking water and supporting healthy communities of aquatic and terrestrial life, as well as diverse and popular recreational uses. We envision a healthy and vibrant agricultural community built on links with citizens who support local agricultural and renewable forest products. We envision increasingly concentrated residential development using conservation design principles with access to collective transportation modes and a web of well-maintained trails. We envision watershed conservation folks from all sectors and communities collaborating to implement effective conservation and restoration practices and foster a creative stewardship consciousness.

Common Eastern Box Turtle
Photo Courtesy of Kai Hagen



Precious Barnes, a former student at TJ Middle school, examines stream life during National Water Monitoring Day.

Photo Courtesy of Shannon Moore

ABOUT US

The Monocacy & Catoclin Watershed Alliance (MCWA) is a mutual, collaborative, non-advocacy effort among individuals and organizations desiring to work together to improve the health of the Monocacy and Catoclin watersheds. Growing out of more than two years of planning for the Monocacy Watershed Restoration Action Strategy (WRAS), a Frederick County coordinated and State assisted local planning process, participants decided to continue their affiliation and cooperation at its conclusion in order to help foster WRAS plan implementation.

THE CHALLENGE



New development in the Monocacy Watershed can preserve its quality and character. How could this development have been designed to better protect the watershed? What can be done now that it is in place?

Photo Courtesy of USDA-NRCS

The Monocacy and Catoctin basins, located primarily in Frederick County's fertile agricultural region, are rich in history, cultural heritage, and natural resources. The areas are also confronted by complex water resource problems that negatively impact the quality of life for area residents and the health of the Chesapeake Bay. Some of the most challenging resource problems are poor water quality due to sediment and nutrients from agricultural lands, atmospheric deposition from fossil fuel burning engines, practices by residential, commercial, and municipal development, high proportions of soils that erode easily, the exploding population growth in the area and rapid land use conversion. For the past few decades, various groups have undertaken initiatives to address water quality issues, and although progress has been made, only partial success has been achieved.

The 1998 statewide assessment of watersheds determined that the Monocacy River and Catoctin Creek watersheds need both restoration and protection to meet water quality and habitat needs.

ALLIANCE PROJECTS

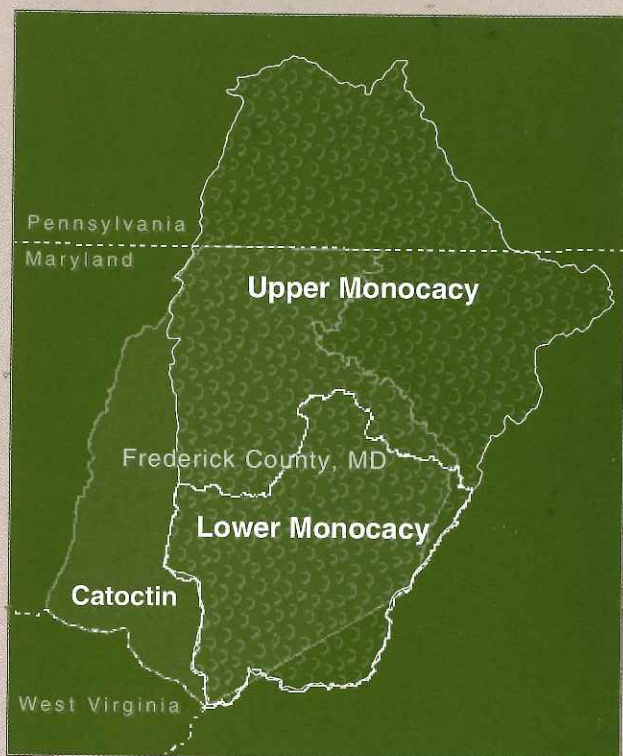
The Alliance has helped encourage and facilitate projects where several partners contribute expertise and resources, resulting in a community restoration project, a demonstration project, or an education and outreach event. Alliance projects that have occurred in the past or are currently underway include:

- The **Cloverhill Community Restoration Project** grew out of a Homeowner Association's interest to improve its stream corridor and involved at least four Alliance partners who wrote a grant application, developed a phased forest stewardship plan, arranged for a school group to plant trees and shrubs that the students had raised, and mobilized volunteers for community work days;
- The **Tree Growth Field Trial** at the Monocacy Natural Resource Management Area investigates four alternative methods of protecting newly planted trees from deer browse. The trial is sponsored by the Maryland Department of Natural Resources. Foresters were assisted by three Alliance partners during the fence installation, planting, measurement and public relation phases of the project;
- The **Libertytown Stewards Project** involves four community restoration projects in Libertytown and outreach and education to area citizens to encourage Bay Wise Landscaping;

- The **Bennett Creek Restoration Initiative** provides outreach and assistance in restoration to urban and agricultural owners along Pleasant and Fahrney Branches in the Bennett Creek watershed;
- The **Linganore TMDL Urban Demonstration Project** and the **Holding Our Ground Project** provide funds for outreach and demonstration projects in the Upper and Lower Linganore Creek watersheds;
- The **Watershed Road Sign Project** involved the installation of 50 signs along County roads in the Upper Monocacy watershed and educate drivers about which subwatershed they enter;
- The **Backyard Buffer Program** occurs each spring and offers 25 free tree and shrub seedlings to landowners with stream frontage; and
- The **Waterford Park Restoration Project** is sponsored by the Friends of Waterford Park. The efforts include invasive species management and the establishment of riparian buffer plantings along Rock and Carroll Creeks. Future plans include the establishment of a warm season grass meadow and butterfly area as well.

For more information about Alliance projects or to learn more about voluntary practices for your property, please visit www.watershed-alliance.com or contact the Community Restoration Coordinator at 301.600.1741 or watershedalliance@fredco-md.net.

WHY CARE ABOUT YOUR WATERSHED?



The Monocacy and Catoclin Watersheds

As the map illustrates, the Monocacy and Catoclin watersheds drain all of the land in Frederick County, along with portions of Carroll County, Montgomery County, and Adams County, PA. All of us who live and work on the land are interconnected. We have a common interest in healthy streams and rivers that support aquatic life and provide drinking water for many locally, as well as downstream. Good quality streams depend upon healthy vegetated stream

corridors that limit erosion, provide shade, contribute leaves and woody debris for aquatic animals, and help filter out soil and pollutants from surrounding residential or agricultural lands. Water is for drink, for play, and for the survival of the aquatic community from the crayfish and mayflies in headwater streams, to the trout and bass in the streams and rivers, to the blue crabs and oysters in the Bay.



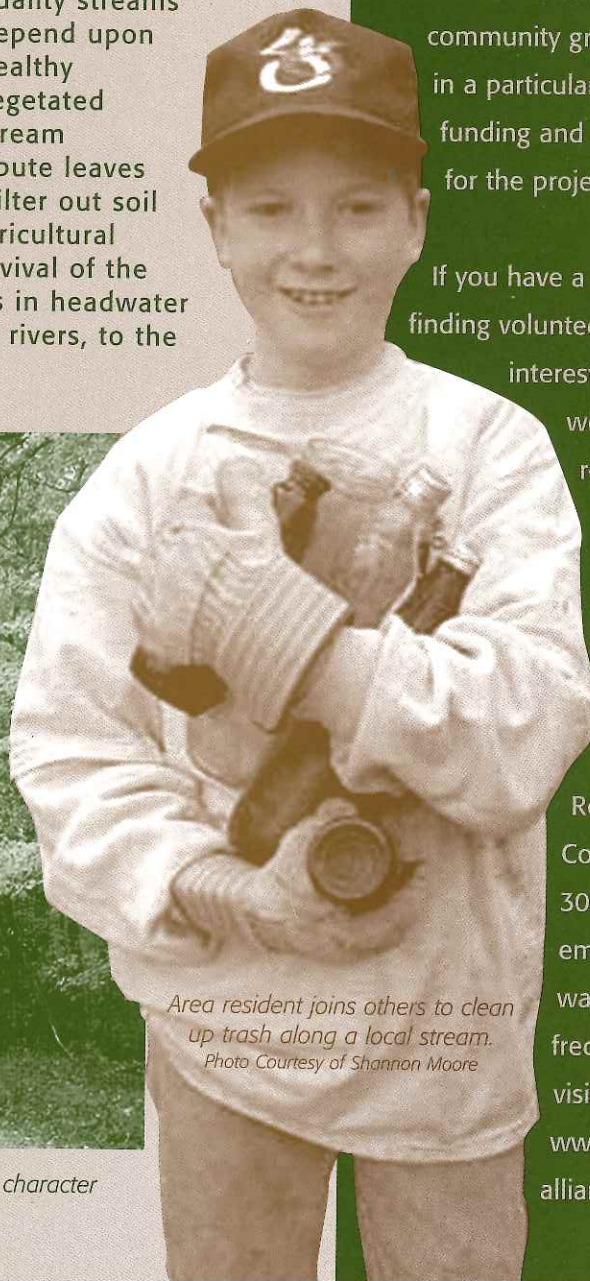
By protecting the Monocacy watershed, we also preserve the rural character treasured by new and old residents alike.

Photo Courtesy of Kai Hagen

HOW DOES THE ALLIANCE WORK FOR THE COMMUNITY?

Community groups with local problems and potential ideas for community restoration projects approach a member of the Alliance and request help. Requests are often referred to the Community Restoration Coordinator who alerts appropriate partners to the potential project and facilitates initial conversations or meetings to discern the best strategy for planning and securing the needed resources. Often, if several interested community groups are concentrated in a particular watershed, the funding and collaborative potential for the project increases.

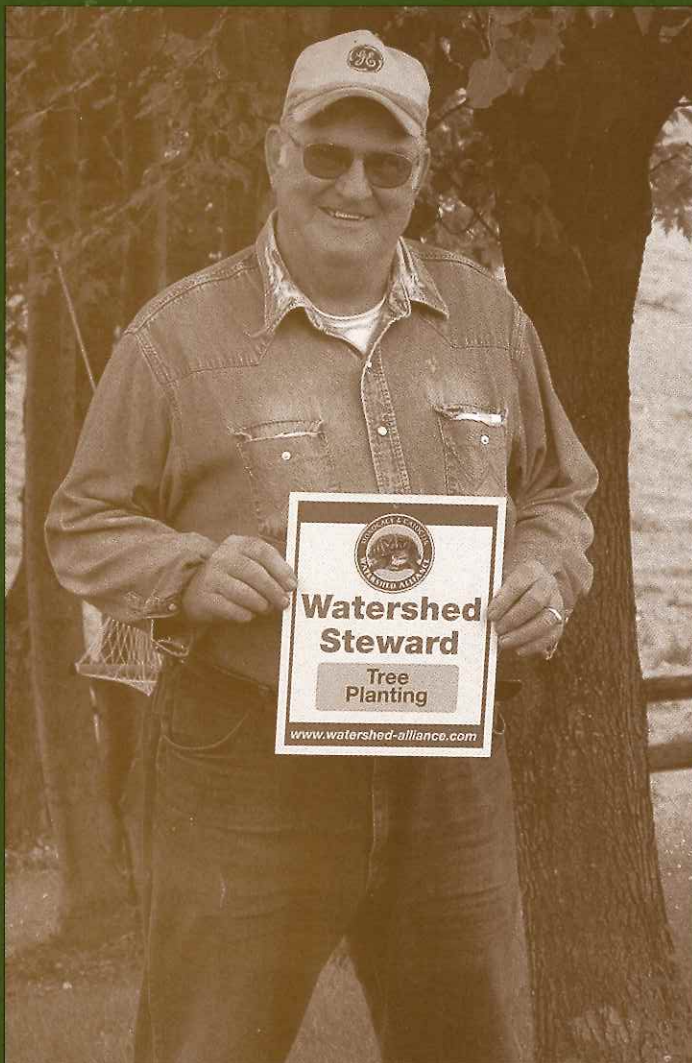
If you have a project, need help finding volunteers or funding, are interested in volunteering, or would just like to receive more information about the Monocacy & Catoclin Watershed Alliance, please contact the Community Restoration Coordinator at 301.600.1741, send an email to watershedalliance@fredco-md.net or visit the website at www.watershedalliance.com.



Area resident joins others to clean up trash along a local stream.

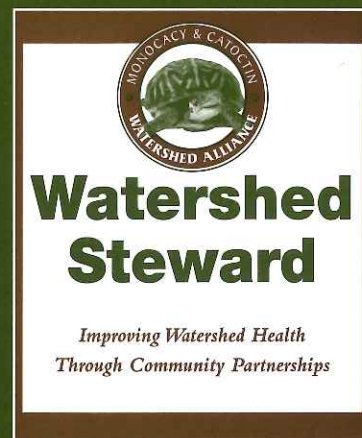
Photo Courtesy of Shannon Moore

THE WATERSHED STEWARD PROGRAM



Thanks to Bill McCall, pictured above, a 4,200 foot stretch of Israel Creek has a vigorous young forested buffer which helps to cleanse and improve the water for aquatic organisms, while providing habitat for wildlife in this "riparian" corridor.

The Watershed Steward Program was developed to recognize the efforts of community members to protect and restore the natural resources of the Monocacy and Catocin watersheds by implementing voluntary conservation and best management practices on their property.



Watershed Steward signs are available to community members who meet the criteria in one of eight different categories:

- Improving Watershed Health Through Community Partnerships
- Rain Gardens
- Forest Conservation Practice
- Agricultural Conservation Practice
- Forest Land Protection
- Farm Land Protection
- Tree Planting
- Wildlife Habitat Improvement

For more information about the Watershed Stewards Program please visit www.watershed-alliance.com/mcwa_stewards.html or email watershedalliance@fredco-md.net.

ALLIANCE PARTNERS

Audubon Naturalist Society of Central MD • Catocin Land Trust • Catocin Mountain Park • Chesapeake Wildlife Heritage • Citizen representatives • City of Frederick • Community Commons • Emmitsburg Business and Professional Association • Frederick County Government • Frederick Forestry Board • Friends of the Lake • Friends of Rural Roads • Friends of Waterford Park • Hood College • Interstate Commission on the Potomac River Basin • Lake Linganore Conservation Society • MD Chapter of American Chestnut Foundation • MD Forest Service • Natural Resource Conservation Service • New Forest Society • Potomac Conservancy • The Potomac Valley Fly Fishers • Strawberry Hill Nature Center • ThorpeWood • Town of Emmitsburg • Town of Mt. Airy • Western MD RC&D • and others.

This publication was funded in part by the National Fish and Wildlife Foundation, The Chesapeake Bay Program, The USDA Forest Service and The US Environmental Protection Agency through their support of The Chesapeake Bay Small Watershed Grants Program.

For more information call 301.600.1741 or visit www.watershed-alliance.com.

Printed with soy-based inks on recycled paper





Town of Emmitsburg Water Bill Newsletter

Updates, Ordinances & Policies You Should Know:

Water Ordinances & Policies

- Water bills are mailed by the 1st of January, April, July, and October (13.04.035, C).
- Water bills are due by the 5th of February, May, August, and November, or the following business day if the 5th falls on a holiday or weekend (13.04.035, C).
- Water bills shall be directed to the property owner or a designated property management company; no tenants (13.04.035, B).
- Property owners are responsible for the maintenance/repair/replacement of the water lines from the curb box to the building (P17-03).
- Any damage caused by neglect/misuse to a curb box is the responsibility of the property owner. Town staff will inspect repairs (P17-03).
- Town staff has the right to enter onto all premises for any water-related purpose (13.04.010, B).
- In the event that water usage is 25%+ than it has been the last 3 years, you may be eligible for a one-time bill reduction. To be granted this, a property owner must submit a request in writing to the Town Manager (13.04.030, C).
- Property owners must take all necessary steps to ensure meters do not freeze or fail due to neglect or damage. If a meter fails due to neglect or damage, the Town will repair the water meter at the property owners expense (13.04.060, C).
- Property owners are responsible for notifying the town of any defective meters within 10 calendar days (13.04.060, D).
- Meters of any size shall be accessible to the town's agents at all times (13.04.060, E).
- Any person who interferes with the town's agents or employees while they read/examine/install/connect/remove a meter or who alter/deface/injure/destroy/disconnect a meter shall be guilty of a misdemeanor (13.04.070, A).
- Town staff has the authority to enter onto premises of any water consumer to investigate whether there is an unnecessary waste of water. If a repair is needed, the owner/occupier will be notified and a repair made by the owner/occupier (13.04.130).
- No tampering of drains, pipes of conduit, any water house, reservoir, the reservoir grounds or the fencing upon such grounds that results in the willful waste of water or unnecessary flow (13.04.170, A).
- No improper connections to public or private pipes, or connections larger than permitted (13.04.170, B).
- The watering of lawns, shrubs, flowers, gardens, etc., via the public water system is prohibited every day between 9:00 a.m. and 6:00 p.m. Violation of this code may result in a \$250.00 fine (13.04.170, C).

Sewer Ordinances & Policies

- Sewer bills will be due by the 5th of February, May, August, and November, or the following business day if the 5th falls on a holiday or weekend (13.08.110, C).
- The Mayor or any person appointed by the Mayor has the right to inspect all public or private sewer lines (13.08.100).
- It is unlawful for any person to obstruct/injure/destroy/interfere with any part of a public or private sewer system (13.08.080).
- Property owners are responsible for the maintenance/repair/replacement of the sewer lines from the property line to the building (P17-03).
- Any damage caused by neglect/misuse to a sewer cleanout is the responsibility of the property owner. Town staff will inspect repairs (P17-03).
- Any clogs from the property line to the structure requires a homeowner to contact a plumber (P17-03).

Note: Failure to follow the below ordinances/policies may result in a misdemeanor charge, immediate shut-off, and/or additional disconnection/reconnection charges of \$100+. All ordinances, policies, and codes can be found at www.emmitsburgmd.gov.

Understanding What Makes Up Your Total Billing Amount

Did you know? Recycling & composting can reduce tipping fees.

Trash Service Base Fee: \$31.00

Trash Service Tipping Fee: about \$15.00 (changes depending on prior quarters weight at landfill, i.e. how much trash is collected).

Note: Below amounts based on the standard residential size.

Sewer Charges:

\$15 bay restoration fee (per State of Maryland)
\$113 base charge (covers up to 6,000 gal)
\$2.40 per 1,000 gal (6,001—10,000 gal)
\$6.00 per 1,000 gal (10,001—20,000 gal)
\$10.00 per 1,000 gal (20,001—100,000 gal)
\$14.00 per 1,000 gal (100,001—1,000,000 gal)

Water Charges:

\$5 maintenance fee (for your water meter)
\$35 base charge (covers up to 6,000 gal used)
\$2.40 per 1,000 gal (6,001—10,000 gal)
\$4.50 per 1,000 gal (10,001—20,000 gal)
\$7.50 per 1,000 gal (20,001—100,000 gal)
\$10.50 per 1,000 gal (100,001—1,000,000 gal)

More on Back

Important Dates:



- ☑ **Fallen Fire Fighters Memorial Weekend:** October 7th– 8th
- ☑ **Halloween Parade:** October 31st
- ☑ **Town Office Closed:** October 9; November 10, 23, 24; December 25, 26
- ☑ **Town Meetings:** October 2; November 6; December 5 (7:30 p.m. in the Town Office)
- ☑ **Town Tree Lighting Ceremony:** December 4th
- ☑ **Next Water Bills Due:** Monday February 5th 2018

Public Hearing: Monday October 16th at 7:30 P.M.

On October 16th the Town is holding a public hearing regarding residents interest in pursuing a service line warranty program through the National League of Cities (NLC) in the Town Office located on the 2nd floor of 300A South Seton Avenue.

Currently Emmitsburg homeowners are responsible for water line repairs from the curb box to the building, and sewer repairs from the property to the building (*Policy 17-03*).



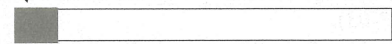
The NLC Service Line Warranty Program gives residents who have not set aside money to pay for utility line repairs the opportunity to obtain a low cost warranty that will provide repairs on leaking, clogged or broken water and sewer lines for a low monthly fee, with no deductibles or service fees. The work is performed by licensed, local plumbers who will call the customer within one hour of filing a claim. The repair is performed typically within 24 hours. For more information, we encourage residents to attend the public hearing in the Town Office.

Dog Park Update

The Town of Emmitsburg is building a dog park as an additional amenity to Community Park. The park will be funded by a grant received from the State of Maryland, but additional money is needed to purchase necessary amenities (i.e. benches, signage, water fountains, trash cans, pick-up bags, and possibly doggy playground equipment). Depending on the donation level, donors can dedicate a fence sign, bench, water fountain, plaque, or photo on the Town website to an organization, loved one, or pet.

- ✓ Dog park site cleared in Community Park (completed June 30th)
- ✓ Contractor chosen for fence installation (completed Sep. 14th)

Donations Received: \$1,865.00; Goal: \$15,000



Compost Bins for Sale at Town Office

Enviro World compost bins are available for Emmitsburg residents for only \$20 (regular price up to \$40). The low price is made possible by grants through Backyard Composting. To reserve your compost bin, please complete an order form by visiting the Town Office or Town Website at www.emmitsburgmd.gov. The bins are one piece of plastic with a top lid and sliding door. Compost guide and 10-year warranty included. First-come, first-served.



For more information please visit/contact the following:

www.emmitsburgmd.gov • www.facebook.com/emmitsburgmd

info@emmitsburgmd.gov • Phone: 301.600.6300 • twitter.com/EmmitsburgMD





Town of Emmitsburg Water Bill Newsletter



Snow Removal Reminders:

Emmitsburg Municipal Code; Section 12.16.010



Before the Snow Storm:

- * Remove all basketball hoops and other play items from street/curbside.
- * Move vehicles from snow emergency routes (if applicable, designated by signs).

After the Snow Storm:

- * Within 24 hours remove snow from any public sidewalks that border property.
- * Within 24 hours remove ice from any public sidewalks that border property.
- * Do not blow/shovel snow into already cleared streets.

New Sidewalk Do's and Don'ts:

If the sidewalk adjacent to your property was replaced this year, **do not** use products containing salt (chloride). Chloride reacts with the aggregate in the concrete to scale and delaminate it. Many "safe concrete" deicers have chloride in them.



- ✓ **Do:** Use kitty litter, sand, or fireplace ashes to de-ice sidewalks. Wash or sweep (if cold) any concrete that gets salt deposited on it from your car.
- ✗ **Don't:** Use products containing salt (chloride), Magnesium Chloride (Mag), or Sodium Chloride (Salt).

Project Updates:

Dog Park – Fence installed. Minor grading and mulch, waterline, benches, pet waste stations, etc. still needed.

Estimated completion: Early spring 2018.

Pool – Concrete shell finished. Back filling, electrical/plumbing work needed. Work will cease after completion of these items until early spring 2018.

Estimated completion: May 2018.

Emmit Gardens Playground – MDE application approved. Awaiting ADA asphalt path and playground equipment installation.

Estimated completion: Spring 2018

Rt. 140 Revitalization project/square – Continued concrete work in square and installing new electrical conduits.

Estimated completion: June 2018



Bi-Monthly Yard Waste & Recycling Drop Off

When: 1st and 3rd Saturday
between 9:00 a.m. and Noon.

Where: Emmitsburg
Waste Water Treatment Plant
16707 Crystal Fountain Rd.

Cost: FREE. Residents only.
Verified with photo ID.

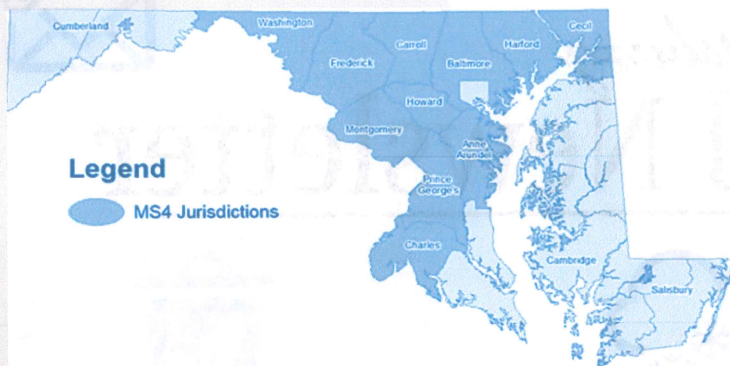
What: Yard trimmings and
brush in biodegradable bags.
Specifics on Town website.



Dates To Remember

- ☑ **Water Bills Due:**
Monday February 5, 2018
- ☑ **Town Office Closed:**
January 15, 2018
- ☑ **Town Meetings @ 7:30:**
January 8, 2018
February 5, 2018
March 5, 2018
- ☑ **Next Bulk Trash Pick-Up**
April 14, 2018
- ☑ **Next Water Bills Due:**
Monday May 7, 2018

More on Back



Emmitsburg MS-4 Permit (Municipal Separate Storm Sewer Systems)

Federal EPA regulations and Maryland state law requires that municipalities undertake activities and have policies and procedures in place to protect and improve water quality in their local streams, which eventually lead to the Chesapeake Bay. Maryland has implemented this law via the Municipal Storm Sewer System Permit Program (MS4), intended to reduce and

eliminate stormwater pollution. In the first phase of program implementation, Emmitsburg is required to document activities undertaken in six categories: Public Education and Outreach, Public Involvement and Participation, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post Construction Management, Pollution and Good Housekeeping. Activities range from mapping all the stormwater ponds and all the stormwater inlets and discharge points along Town roads, providing information via our website, literature rack, Green Team activities, use of a street sweeper on Main Street, to having procedures in place in case of spills. In the next phase of the program, the Town will need to undertake projects to either reduce the amount of impervious (water can't get through) area in the town, or do other things to help reduce the amount or slow down the speed of stormwater runoff. These can include the planting of trees, inspection training for staff, ordinance changes to allow alternative types of paving materials, inspections of stormwater ponds and stormwater inlets, etc.

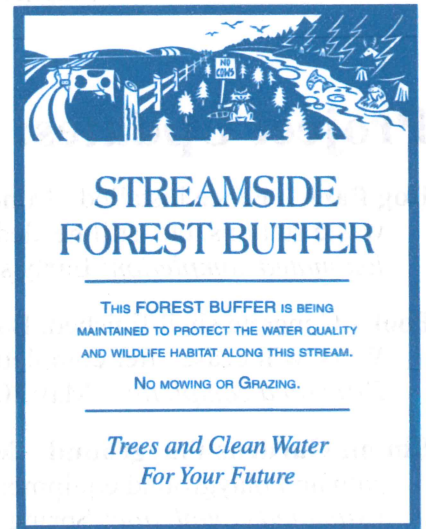
As activities are planned, there will be a need for volunteers. Upcoming tree planting efforts in Emmitsburg will be provided in the next newsletter, along with opportunities to volunteer.

Help us reduce the amount of stormwater pollution, the erosion of streams, and improve the water quality in our local streams as well as the Chesapeake Bay by volunteering to plant trees.

Emmitsburg Riparian Forest Buffers

Part of the MS-4 program is reducing the amount of stormwater runoff by undertaking efforts to slow water down and have it infiltrate back into the ground and our water supply. Streamside or riparian (derived from a Greek word meaning "on or near the shore") are one of the most effective and least expensive ways to protect rivers and their tributaries. Riparian buffers filter sediment and pollutant runoff from non-point sources such as streets, storm drains, and parking lots, and provide extensive root systems that "lock" soil particles together, slowing erosion. The organic layer on the riparian forest floor, made up of leaves, twigs and fallen logs, create a natural "sponge" that stores water and nutrients, and converts fertilizers and pollutants into environmentally-safe compounds that can be absorbed by trees and vegetation. In addition, riparian forests shade streams and cool water temperatures, providing a desirable habitat for entire ecosystems of macroinvertebrates, fish, and mammals.

More information at <http://dnr.maryland.gov/forests/pages/publications/Sink.aspx>.



For more information please visit/contact the following:
www.emmitsburgmd.gov • www.facebook.com/emmitsburgmd
info@emmitsburgmd.gov • Phone: 301.600.6300 • twitter.com/EmmitsburgMD



MS-4 Permit

Emmitsburg Town Board Meeting

November 6, 2017

Chesapeake Bay Watershed



- Source – Cooperstown, NY
- Covers parts of five states and Washington, D.C.
- Most of Maryland lies within the Chesapeake Bay Watershed



Background

- 1990 – United State Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) municipal stormwater program regulations were published.

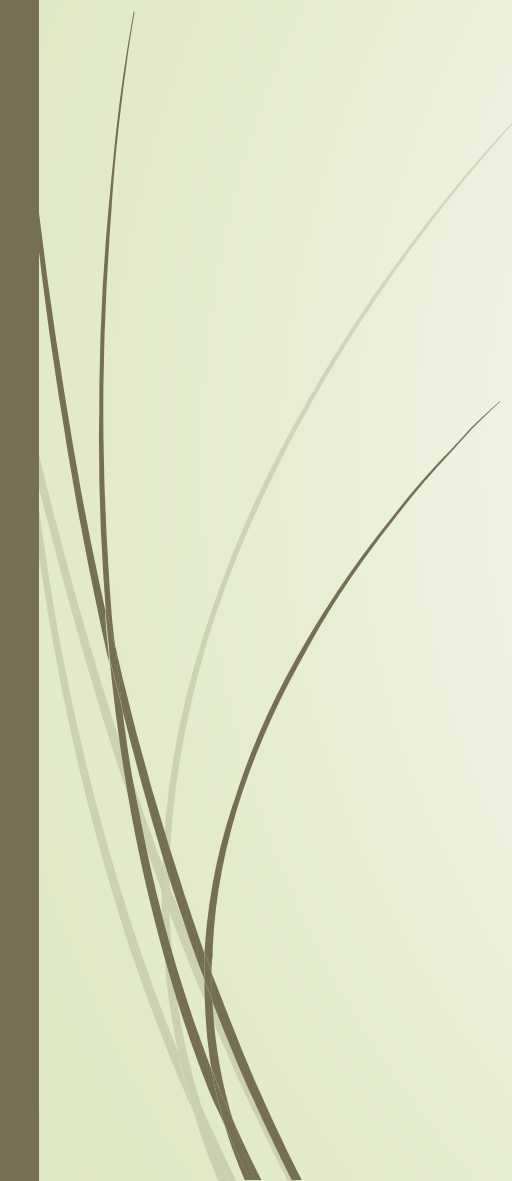
Two phases of permitting:

Phase I -- **Individual** permits required for large industrial activity and municipalities over 100,000, plus State Highway Administration. Object was to reduce stormwater runoff and associated pollution.

Phase II – **General** permits required in 1999 for smaller municipalities and for State and federal agencies.

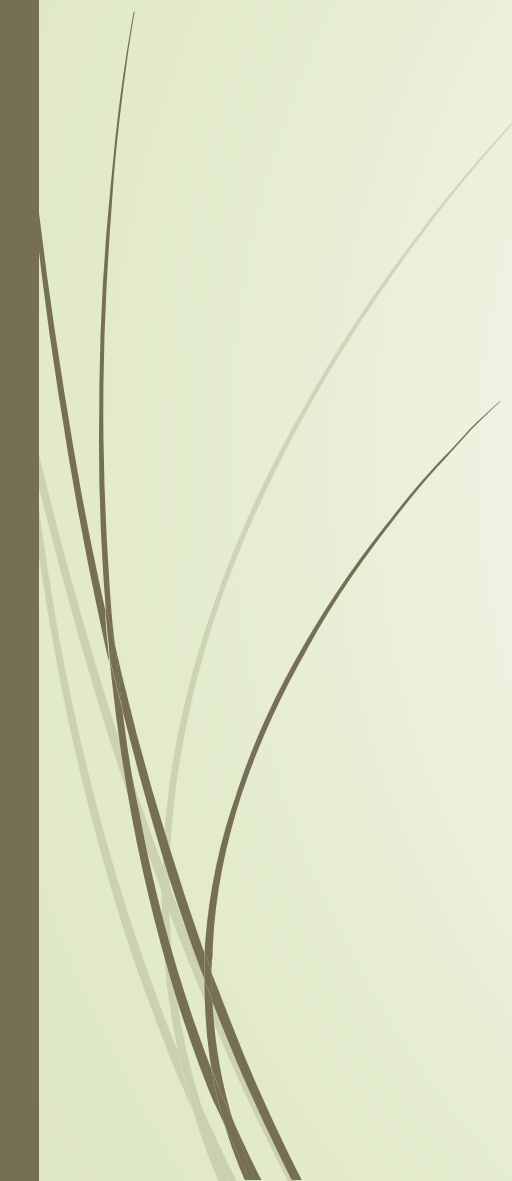


General permits

- **April 14, 2003** MD Dept. of the Environment adopted a general permit for designated small municipalities. There were six minimum control measures.
 - Public education and outreach
 - Public involvement and participation
 - Illicit discharge detection and elimination
 - Construction site stormwater runoff control
 - Post construction stormwater management
 - Pollution prevention and good housekeeping
- 



Emmitsburg's compliance requirements

- Annual report describing efforts to achieve each of the 6 required activities.
 - The Town complied initially, but missed some annual reporting.
 - MDE was not providing feedback until recently regarding the adequacy of the reports.
 - Currently need to complete a 2016/2017 annual report by December 31, 2017.
 - Need to show that the town is taking action on each of the 6 required elements.
 - Need to provide more detail, examples, documentation of accomplishments.
- 

Compliance with the 6 elements



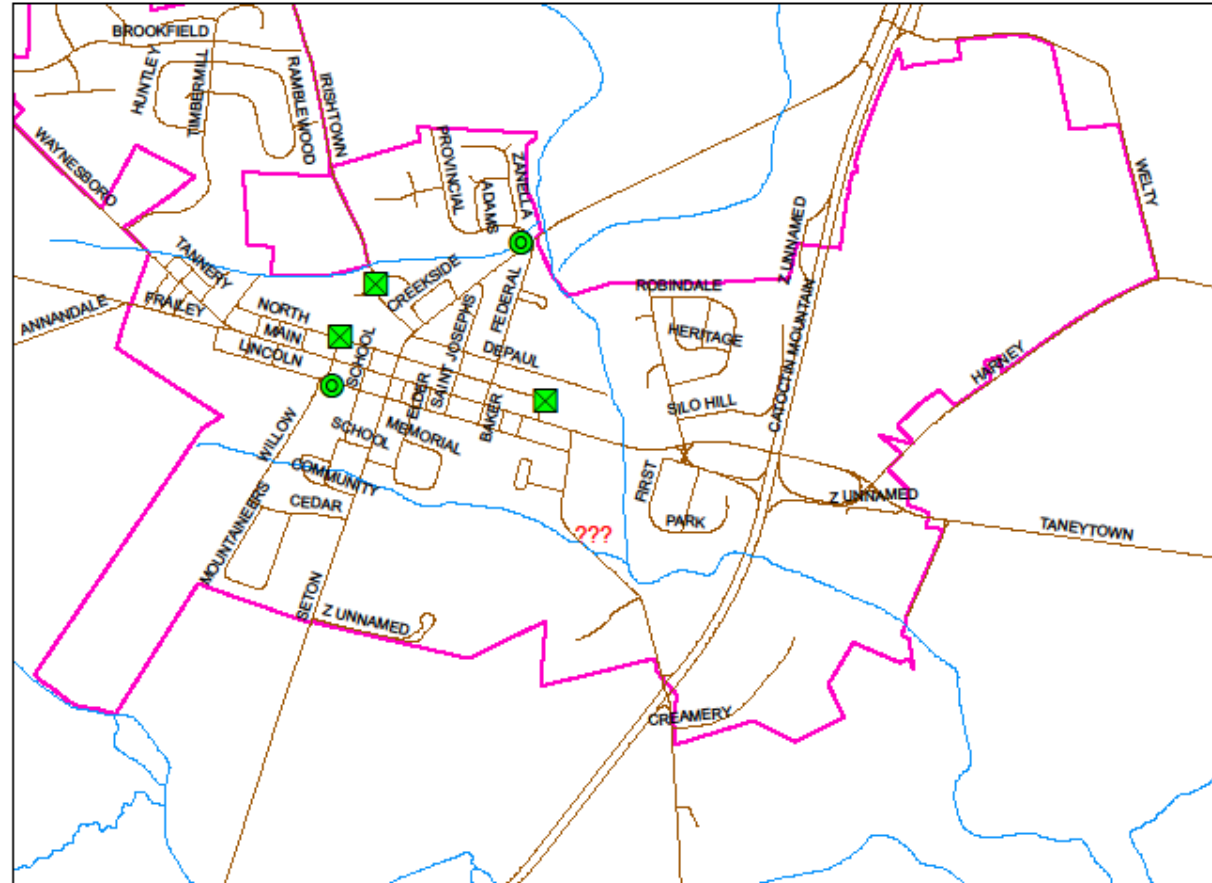
- Provide examples of stormwater education brochures distributed via the Town office

- Provide more information on the Emmitsburg Comprehensive Plan, examples of accomplishments and goals re water quality and other environmental issues.
- Provide specific information about public outreach and participation efforts, future plans.
- Document number of participants and specific accomplishments during community events.



Provide a recent map of the town's storm drain system

Work in progress, only need to show town streets, not State





Storm Drain & Stormwater Pond inspections & Compliance


- Provide the status of implementing a Town ordinance that authorizes the Town to enter private property and eliminate any suspected illicit discharge, and the charge penalties related to illegal discharges into the Town's storm drain system.

(The Town already has easement agreements re stormwater ponds, but needs to research where, and ownership related to storm drain outlets.)
- Develop Standard Operating Procedures for the Town's illicit discharge program.
- Identify frequency of outfall inspections, priority screening locations, process for identifying and eliminating illicit discharges.
- Document inspections and report incidents in annual report.
- Provide a summary of maintenance activities or corrective actions for illicit connections, erosion, debris buildup sediment accumulation, etc.



Additional items

- Town staff should take the online training MDE's Responsible Personnel Certification (RPC) for stormwater, stormdrain inspection, and report status of training in next annual report.
- Provide a summary of collaboration with Frederick County related to inspections of construction projects and post construction best management practices.
- Provide a summary of maintenance activities at stormwater ponds owned by the Town.
- Describe and document good housekeeping practices, such as hazardous material storage, street sweeping, inlet cleaning, and any training programs, dates attended, etc.
- Verify that a pollution prevention plan is maintained and up to date for all Town owned facilities.



Next phase – Mitigation

- Reduce amount of impervious surfaces in the Town
- Retrofit existing stormwater ponds by working the Home Owners' Associations (no money available)
- Plant trees, do stream restorations – counts toward mitigation.
- Adjust current ordinances to allow/encourage pervious paving options rather than asphalt or concrete.
- Likely to need some consultant assistance on projects and calculating the amount that each project counts toward overall goal.

SECTION 2 PUBLIC INVOLVEMENT & PARTICIPATION

2. Public Involvement and Participation

The Town undertook a stenciling program during the early years of the permit coverage, and installed aluminum storm drain medallions during the 2015-16 summer seasons, utilizing existing and seasonal DPW staff. The drain stencils do appear to increase awareness of where the water goes and why pollutants should not be dumped into the drains. There have not been any known instances of dumping of pollutants into the storm sewer system.

The Town has become a Sustainable Maryland Community, seeking to implement green initiatives and practices. A "Green Team" including town staff and community members has been meeting to determine what projects could be undertaken. The Team is under new leadership and will be more effective in the future. The list below illustrates the type of Green Team activities that took place during 2017. Minutes of the Team meetings are available if desired.

1. Compost Bins: The Team determined this was something they wanted to start, and reached out to Sustainable Maryland for more information. Through the use of a Backyard Composting Grant, 43 bins were purchased at a price of \$28 each. The Town pays \$8 and residents pay \$20 for bins which usually carry a value of about \$40. All but 5 of the bins have been sold as of 11/22/2017. Frederick City purchased a huge order and Emmitsburg partnered with them to get the bins, which helped reduced shipping fees. Attached are the 2 purchase orders. More information can be found on the website: <https://www.backyardcomposting.org/>
2. Tree City USA Certification: In process. We hope to achieve this status in 2018 and plant trees in April 2018.
3. Rain Barrels: The Green Team is currently researching the cost of rain barrels.
4. Green Team Training: Mike Hunninghake with Sustainable Maryland is training our Green Team January 24, 2018.
5. Community Survey and Composting Tent: At Community Heritage Day 2017 we had a composting tent to promote the sale of our compost bins. Volunteers were also passing out surveys (only 4 were completed) and raffling off a compost bin. The survey helped to determine resident interest in various programs and sustainable actions they wish the Town would pursue more. The survey is likely to be repeated in the future to encourage additional input.

See Section 6 for examples of Green Initiatives accomplished during 2016-2017.

SECTION 3

ILLICIT DISCHARGE DETECTION AND ELIMINATION

3. Illicit Discharge Detection and Elimination

Until recently, the Town was under the impression that Frederick County was performing inspections of storm drains and outfalls. In fact, Frederick County performs inspections of stormwater management facilities on a triennial basis only, and does not inspect storm drains and outfalls at all unless they are on County roads. This is a task the Town will be undertaking beginning in 2018. We are only responsible for drains on town roads, while State Highway Administration is responsible for the drain systems on MD140 and Bus15. In order to accomplish this task, we are doing the following:

1. GIS mapping of the Town storm drains and outlets that do not lead to a SWM pond. Draft map is attached. It also shows which roads are State and County responsibility. Future GIS efforts will incorporate the storm drains that lead to SWM ponds. (See below for previous mapping of SWM ponds.)

The Town has hired ALWI consultants to set up and populate the data base for town systems. Our first priority is the water and sewer system, and that effort is underway. The Town Planner has been working with the Town DPW to develop the storm drain/outlets mapping for town roads.

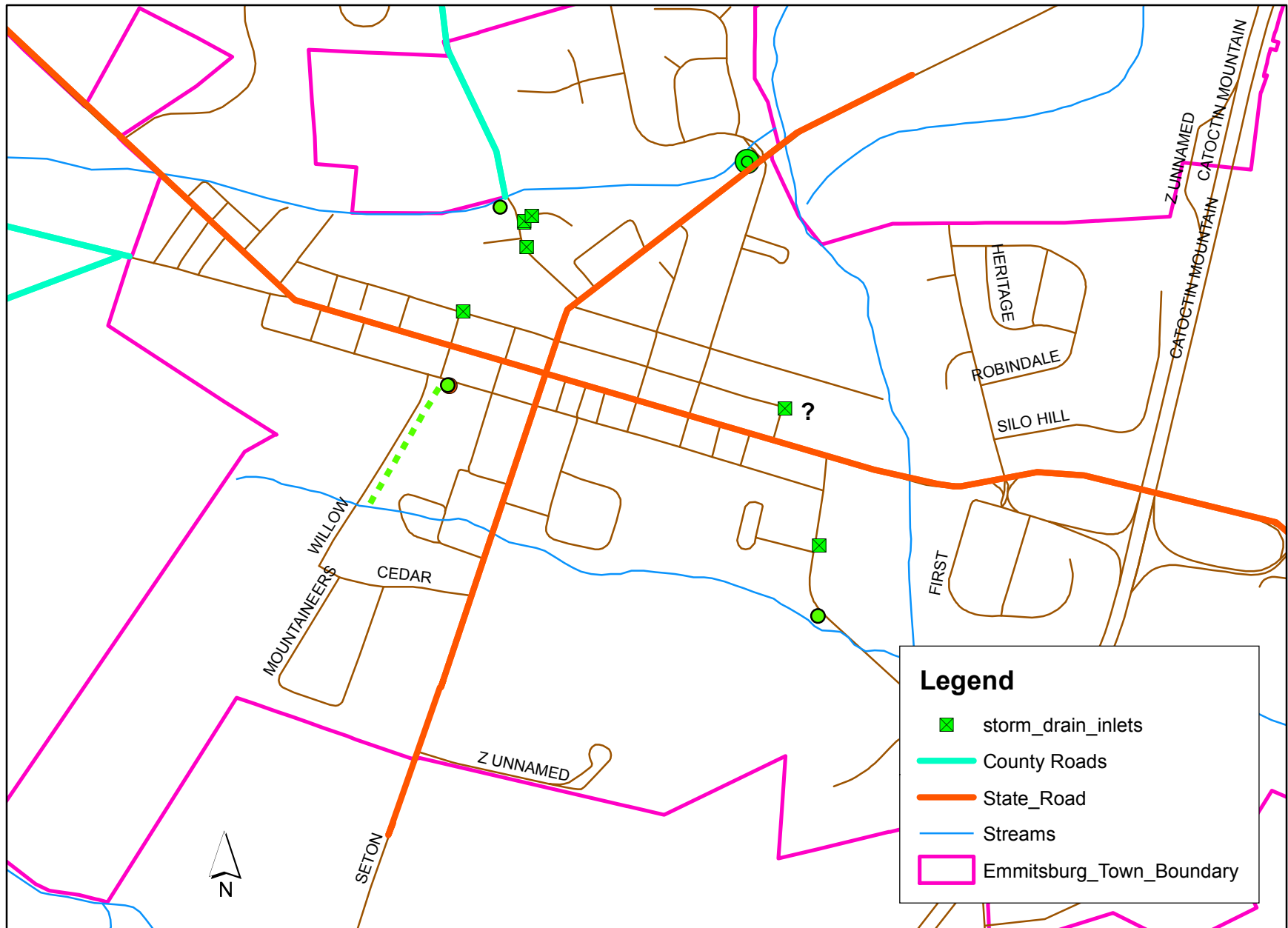
2. State of Maryland Erosion & Sediment Control certification. The Town Manager and Code Enforcement staff person have completed the training (certificates attached), and Public Works staff will be certified during 2018.
3. Currently, storm drains are checked 1-2 times per year, or in response to reports from the public. During 2017, the inlet on Irishtown Road (see map) was cleaned out in response to a citizen report that drainage was sluggish. When more staff have completed the MDE certification training, the Town will be more able to evaluate an inspection schedule and standard operating procedures for illicit discharges.
4. Will ask Frederick County to provide triennial inspection reports performed on existing SWM facilities. Will compare with our database to ensure that both parties have all BMPs in our database systems.

Previous SWM pond mapping:

In the 2003 NOI, the Town was tasked with mapping the storm drain system and providing the map with its annual report. Since that time, the Town experienced growth in the form of new subdivisions, which lend themselves better to having digital maps available which can be printed out at the size desired at the time. Plans were scanned and provided with the 2014 report, along with a map showing the subdivision locations within the town. It should be noted that not all of the subdivisions have storm drain systems -- being dependent on surface flow only.

The 2014 mapping efforts were undertaken with the use of the DFI engineering firm, to develop as-built information regarding existing swm ponds and their locations within the town. There are 13 privately-owned ponds and 1 owned by the town. Main Street (Rte. 140) and Seton Avenue (Bus. 15) are State roads, and would be included in SHA storm sewer mapping.

Emmitsburg Storm Drain system not entering SWM ponds - draft



SECTION 4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

4. Construction Site Runoff Control

The Town of Emmitsburg relies on Frederick County to implement this requirement as a “qualifying local program” as defined in the general permit. The County is delegated erosion and sediment control enforcement authority, including construction activities within Emmitsburg. This arrangement has been working very well. A project currently under construction is the Seton Center at 226 E. Lincoln, pictured below. It will provide services to the community, and includes a thrift-type store. Anticipated opening Summer/Fall 2018.



SECTION 5 POST CONSTRUCTION MANAGEMENT

5. Post Construction Management

As noted in the Site Runoff Control, Section 4, the Town relies on Frederick County to implement this requirement, as a “qualifying local program” as defined in the general permit.

The Town will work with Frederick County to secure (or access to) a complete database regarding Stormwater facilities and the County’s triennial inspections. Over time, the town hopes to incorporate SWM inspection data into the GIS system.

SECTION 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING

6. Pollution Prevention and Good Housekeeping

This requirement ensures that all town-owned facilities have NPDES permit coverage, if applicable. There are no known town-owned facilities that have connections to the storm sewers via drains, swales, etc. The town-owned buildings and their coverage under NPDES permits are found below. (*Note: 2003 NOI referred to NPDES permit coverage for industrial facilities, but we believe it should have said "town-owned" or "municipal" facilities.*)

Town Facilities:

*Water Treatment Plant – 8585 Crystal Fountain Road. All fluids that enter the floor drains are run through the roughing filters, to the backwash tanks, and into the backwash pond. The backwash pond is regulated under **NPDES permit #11-DP-2364** and monitored as required.*

*Waste Water Treatment Plant (WWTP) – 16707 Creamery Road. In July of 2016, the new wastewater treatment plant went online with annual effluent goals of 3.0 mg/L of total nitrogen and 0.3 mg/L of total phosphorus. All fluids entering floor drains are handled/treated within the system and routed to the sediment pond. Anything hazardous is treated within the WWTP. **NPDES permit #09-DP-0113** governs the WWTP.*

Town Maintenance Garage – 22 E. Main Street. The floor drains in the garage feed to the town sewer system main and to the WWTP.

Pump Station – 17700 Creamery Road - All materials are routed to the WWTP.

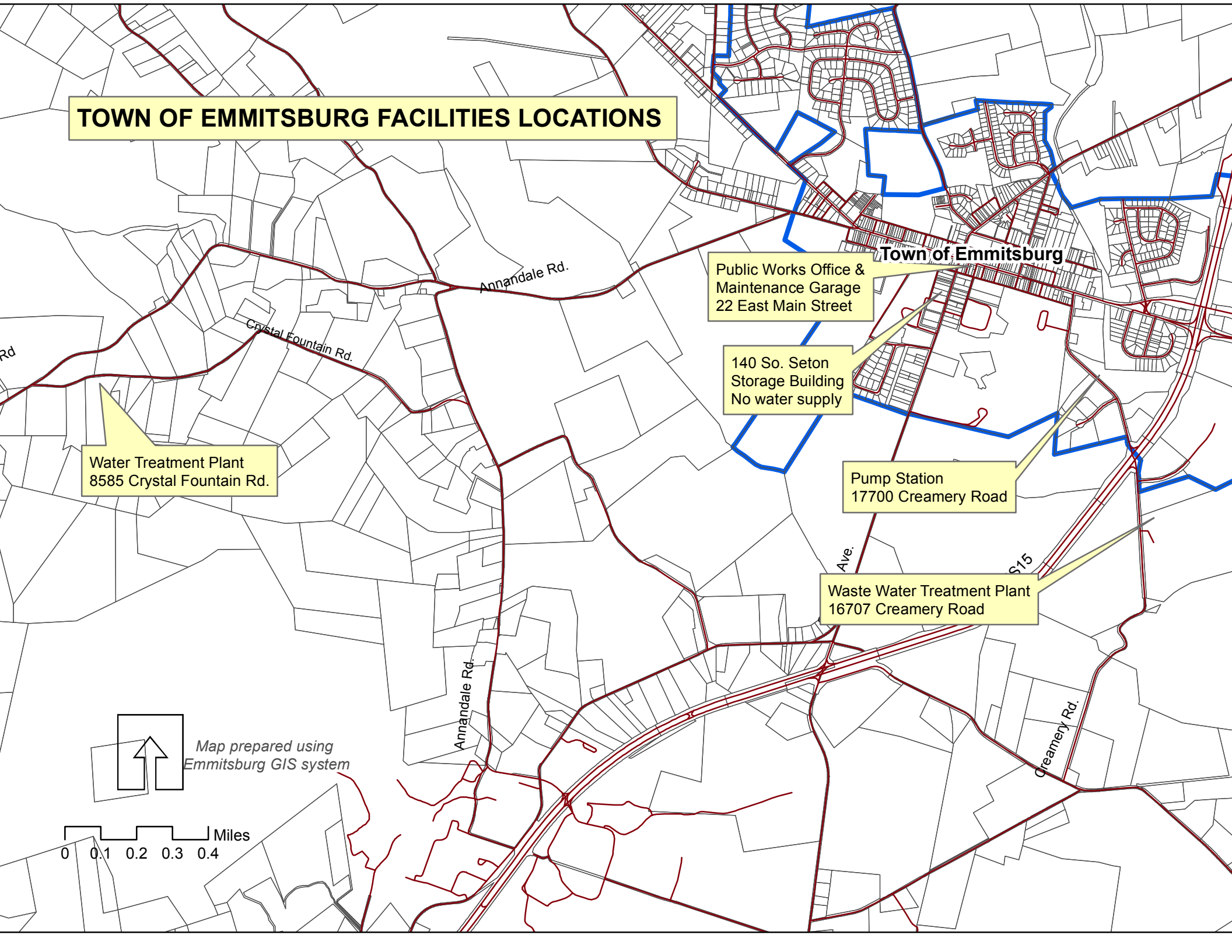
140 So. Seton Avenue – Storage facility building at back of property has floor drain but no water supply since it came under Town ownership, so there is no runoff/drainage issue.

Additional information about the Town's water and sewer system is in Section 5 of the 2015 Town of Emmitsburg Comprehensive Plan on www.emmitsburgmd.gov

Pollution prevention –

Rainbow Lake is a reservoir for the Town's water supply. It is also open for fishing and is stocked with trout by DNR on several occasions annually. The shoreline of the lake has deteriorated and it will be rehabilitated over the next three years. During 2017, 150 linear feet of the shoreline was stabilized via the use of filter cloth and placement of rip rap 4-5 feet up the bank. This will prevent erosion, thus decreasing sediment that needs to be handled by filters in the water treatment system, and providing a safer environment for those wanting to fish. The invoice for the work is included in Section 6.

TOWN OF EMMITSBURG FACILITIES LOCATIONS



Town of Emmitsburg

Public Works Office &
Maintenance Garage
22 East Main Street

140 So. Seton
Storage Building
No water supply

Pump Station
17700 Creamery Road

Waste Water Treatment Plant
16707 Creamery Road

Water Treatment Plant
8585 Crystal Fountain Rd.

Map prepared using
Emmitsburg GIS system

0 0.1 0.2 0.3 0.4 Miles

Standard operating procedures for all town facilities are being updated at this time, to reflect current concerns and practices. Training needs will be identified (including the online SWM certification). The Town would hire a licensed pesticide applicator rather than have town staff undertake that particular training. One example of this was treatment of Ash trees identified by DNR staff as worth saving. A pesticide applicator was hired to treat 5 trees in Community and Memorial Parks as a preventive measure.

Housekeeping –

To decrease the potential for pollution associated with surface runoff, the Town DPW sweeps the parking spaces along Main Street (Rte. 140) on a monthly basis and in preparation for special events. This activity was recommended by MDE. There is not a significant amount of sediment, but it is taken to a town facility and any non-sediment debris is burned.

The town has installed pet waste stations at various locations within the town parks and along the E. Lincoln walking path, to help ensure that this particular source of pollution is addressed. Public notices regarding the requirement to pick up after pets is on the town website, facebook, and Ch.99.

Green Initiatives



The Town of Emmitsburg has been recognized for its extensive efforts to undertake projects and institute practices that enhance the environment and also result in cost savings for the town. The are summarized on the following page, which is the Maryland Green Registry 2017 Leadership Award Winner certificate.



Maryland Green Registry

2017 Leadership Award Winner Town of Emmitsburg



About the Town of Emmitsburg

The Town of Emmitsburg has a population of approximately 3,000 and is located in Frederick County, Maryland, just south of the Maryland-Pennsylvania border. Emmitsburg's Green Team includes the Mayor, Town staff, community leaders, and residents and meets monthly to lead and coordinate sustainability activities in the community.



300A South Seton Avenue
Emmitsburg, MD 21727

Achievements

Renewable Energy: Emmitsburg has installed two solar fields, which produce approximately 3 million kilowatts a year and provide 100 percent of the energy for the Town's new Waste Water Treatment Plant and all major Town energy accounts. Since installation in 2015, utility costs have decreased by 50 percent and the Town has avoided producing over 11 million pounds of carbon dioxide. The Town expects to have more than 94 percent of all government electrical needs met with renewable solar energy.

Energy Efficiency: The Board of Commissioners, which works closely with Emmitsburg's Green Team, passed a policy to reduce energy consumption by 15 percent by 2019. To date, the Town has replaced all of its street lights with efficient LEDs, reducing electrical usage by 60 percent and the Town's overall electrical use by 9.5 percent.

Water Conservation: In April 2017, the Town installed an algae control system on Rainbow Lake, which supplies drinking water for the Town of Emmitsburg. The new system is powered by solar energy and is estimated to produce water savings of 642,250 gallons a month (50 percent of current average usage) and cost savings of about \$19,385 a year from the reduction of chemicals and backwashes. In addition, there are numerous other savings such as a reduced reliance on the Town's well system and electrical savings.



The Maryland Green Registry Leadership Awards recognize organizations that have shown a strong commitment to the implementation of sustainable practices, the demonstration of measurable results, and the continual improvement of environmental performance.

www.green.maryland.gov

Emmitsburg has installed pet waste stations in Community Park (2), Memorial Park (2), and along the E. Lincoln pathway (1). These have been well-received and utilized, and have reduced complaints about dog waste being left behind.



**SUSTAINABLE MARYLAND
CERTIFIED**

2015

Town of Emmitsburg



Helping Communities Invest Today for A More Livable Tomorrow

SECTION 7 TRAININGS CONFERENCES & MEETINGS Etc.

Training:

Two Town staff members have successfully completed the State of Maryland Erosion and Sediment Control Certification training. They are Cathy Willets, Town Manager (RPC011796), and Amy Naill, Code Enforcement (RPC011835) staff person. Copies of their certificates are attached on the next page.

Conference:

Susan Cipperly, Town Planner, attended the Maryland Association of Floodplain and Stormwater Managers Conference on October 12, 2017, and also acted as a moderator for some of the sessions.



Meetings:

Cathy Willets, Town Manager, and Susan Cipperly, Town Planner, attended a joint meeting with Walkersville and MDE staff on July 18, 2017, to discuss what the specific expectations are for MS-4 reports.

Cathy Willets and Susan Cipperly attended August 10, 2017 meeting in Frederick with other towns to hear presentations by County and State staff regarding options and potential solutions for the next phase of the MS-4 permits.

Future Plans:

Tree planting event(s) in Spring 2018, potentially joint project with Frederick County Public Schools.

Ordinances:

Town Ordinance amendments to be considered during 2018

- Allow pervious paving options in code sections where concrete or asphalt are currently required.
- Consider the ordinances recommended by MDE that would allow the Town to enter onto private property and eliminate any suspected illicit discharge.

State of Maryland

Erosion & Sediment Control Certification

Be it known that

Amy Naill	12/12/2017
Name	Date Issued

has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.



No. RPC011835



State of Maryland

Erosion & Sediment Control Certification

Be it known that

cathy willets	12/5/2017
Name	Date Issued

has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.



No. RPC011796



Certifications:

Two Town staff members –

- Cathy Willets, Town Manager
&
- Amy Naill,
Code Enforcement Officer

have completed the MDE Erosion & Sediment Control Certification training as of 12/2017. •

Other staff will be completing the training during 2018.