



# *Town of Emmitsburg*

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November 1, 2018

Michelle L Crawford  
MDE Water Management Administration  
Sediment, Stormwater, and Dam Safety Program  
1800 Washington Boulevard  
Suite 440  
Baltimore, MD 21230-1708

Dear Ms. Crawford:

I have attached the final report that covers the time period of January 1, 2018 through October 30, 2018 for the Town of Emmitsburg's General Discharge Permit No. 13-IM-5500.

Please let me know if any additional information is required.

Sincerely,

Zachary R. Gulden, MPA  
Town Planner

# State of Maryland MS4 Annual Report

January 1, 2018 - October 30, 2018

Prepared for



Town of Emmitsburg, Frederick County



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**Town of Emmitsburg**

**Minimum Control Measure #1**

**Public Education and Outreach Program (PEOP)**

Latest Revision: 10/30/2018



## Minimum Control Measure (MCM) #1 Public Education and Outreach

### Introduction

As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Public Education Outreach Plan (PEOP) is to implement and maintain a public education and outreach program and distribute educational materials to the community and employees to help reduce the discharge of pollutants caused by stormwater runoff.

### Stormwater Management Best Management Practices (BMP) 1.1 - Public Hotline

- **Requirement:** Develop a hotline for the public to report water quality complaints.
- **Action Plan:** The Town has added a stormwater management page to their website, which can be located at [http://www.emmitsburgmd.gov/planning\\_and\\_zoning/stormwater\\_mgmt\\_ms4.php](http://www.emmitsburgmd.gov/planning_and_zoning/stormwater_mgmt_ms4.php). Material on how to report illicit discharges and contact information is provided. Also, available on that page are links to the Stormwater Annual Progress Reports and other educational and environmental information. Pictures of the website page are found in Section BMP 2.4 – Public Access. Please see the attached 2018 water quality complaint log.

### 2018 Stormwater Complaint Log

<b>Date:</b> 08/06/18	<b>Complaint:</b> Chris stated that stormwater runoff from the PNC Bank and Dr. Bringardner properties are causing erosion issues on his property.
<b>Caller:</b> Chris Price / Chronicle Press	
<b>Address:</b> 107 S Seton Ave	
<b>Phone Number:</b> 301-447-2333	
<b>Routed to:</b> Jim Click, Dept. of Public Works & Zach Gulden, Town Planner	<b>Comments:</b> Jim & Zach met with all parties at 107 S Seton Ave on 08/10/18 and determined it was a private matter. All private parties agreed to work together to redirect stormwater to a proposed raingarden on Dr. Bringardner's property.
<b>Resolution Date:</b> 08/10/18	

<b>Date:</b> 08/13/18	<b>Complaint:</b> Jim stated that the stream behind his house is normally 3 feet wide, but it has been over 15 during the recent rain events. He asked if the Town or County have any future stream restoration / bank stabilization projects planned for the stream in order to help protect his home from the water.
<b>Caller:</b> Jim Julian	
<b>Address:</b> 814 W Main St	
<b>Phone Number:</b> 301-447-2720	

<b>Routed to:</b> Donald Dorsey @ Frederick County & Zach Gulden, Town Planner	<b>Comments:</b> Zach told Jim that the Town does not have any projects planned for the stream. Donald told Jim that neither the County nor State have any projects planned.
<b>Resolution Date:</b> 08/17/18	

<b>Date:</b> 08/22/18	<b>Complaint:</b> Stormwater runoff is coming off neighboring properties and the alley into his apartment complex.
<b>Caller:</b> David Aloï	
<b>Address:</b> 100 Creekside Drive	
<b>Phone Number:</b> 301-606-0488	
<b>Routed to:</b> Jimmy & Zach	<b>Comments:</b> Staff determined that the some runoff from the alley is going onto the applicant's property. A curb was installed in order to direct the stormwater flow to the stream and away from building.
<b>Resolution Date:</b> 10/2/18	

<b>Date:</b> 08/29/2018	<b>Complaint:</b> The neighbor repaved their driveway and now the stormwater runs onto their property.
<b>Caller:</b> Brenda Miller	
<b>Address:</b> 45 Federal Ave	
<b>Phone Number:</b> 717-357-2980	
<b>Routed to:</b> Zach	<b>Comments:</b> Zach investigated on 8/29/18 and determined the drain was not installed per the zoning permit. The water was approved to drain by the mailbox, which is approximately 10 feet away from the current location. The contractor moved the drain to the correct location.
<b>Resolution Date:</b> 10/9/18	

<b>Date:</b> 08/30/2018	<b>Complaint:</b> Ralph said that stormwater now enters his basement, and it did not do so before the sidewalk project.
<b>Caller:</b> Ralph Irelan	
<b>Address:</b> 1 East Main Street	
<b>Phone Number:</b> 301-447-6265	
<b>Routed to:</b> Sherry Waselchalk, State Highway Administration	<b>Comments:</b> The State Highway Administration is responsible for the sidewalk project. Zach emailed Sherry the complaint. Sherry said Ralph must have a third party company determine if the stormwater is entering the basement due to the sidewalk project or if it is a preexisting condition. Zach forwarded this to Ralph.
<b>Resolution Date:</b> TBD	

## BMP 1.2 – Target Audience

- **Requirement:** Determine the target audience within the jurisdiction and develop materials to educate the audience on the impact of stormwater.
- **Action Plan:** The Town has identified residents, homeowner associations, businesses, environmental groups, elected officials, and municipal employees as the target audience groups. Educational materials can be found in section MCM 1.3.

## BMP 1.3 – Distribution of Educational Materials

- **Requirement:** Distribute stormwater educational materials through newsletters, website, or other appropriate methods.
- **Action Plan:** Materials to educate the identified audience are distributed at the Town Office, Town website, cable channel 99 (local government channel), Facebook, Twitter, and through the Town's newsletter that is attached to water and sewer bills.

Town Newsletter: The Town aims to publish stormwater articles in at least one newsletter every year. The spring newsletter in March of 2018 included a reminder for residents to clean-up after their pets in order to prevent animal feces from entering and polluting the stormwater system.



Literature Rack in the Town Office: The Emmitsburg Resource Center is located in the front hallway of the Town office and was created in 2006 when the Town office moved to its current location at 300A South Seton Avenue. The information rack can be found directly on the left when a member of the public walks in the front door (see photo). The Resource Center currently includes the following stormwater related items (among others):

- Composting: Do the Rot Thing
- Maintaining Your Lawn While Protecting Water Quality
- Natural Household Cleaners
- Harvesting Rainwater Using Rain Barrels
- Gardening With Native Plants
- Design and Construction of a Rain Garden

It should be noted that this information can also be found on our website.







## 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/](http://www.co.frederick.md.us/Recycling/)
- Demonstration Center at the Frederick County Landfill**
- United States Environmental Protection Agency**  
[www.epa.gov](http://www.epa.gov)  
1-800-490-9198
- City of Toronto**  
has a comprehensive composting website at [www.city.toronto.on.ca/compost/index.htm](http://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 food trimmings and 11.4 percent was yard 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 fast 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
Fruit and vegetable scraps	Meat
Egg shells	Dairy products
Coffee grounds and filters	Oil or grease
Tea bags	Pet waste
Leaves	Fish scraps
Grass	Diseased plants
Yard clippings	Bones
Lint	Sawdust from plywood, treated or painted wood
Fresh garden trimmings, flowers, and plant leaves	Clippings recently treated with herbicides or pesticides
Barnyard manure (horse, cow, chicken)	Insect-infested plants
Shredded paper, cardboard, paper towels, napkins or tissues	Cooked vegetables and fruit

##### Browns (Carbon)

- Leaves
- Straw
- Woody Materials

##### Greens (Nitrogen)

- 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.

#### DID YOU KNOW...

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

-US EPA

#### 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.



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](http://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](http://www.communitycommons.org).



## BUILDING A GREENER LIFESTYLE FOR FREDERICK COUNTY

### Maintaining your Lawn while Protecting Water Quality

#### LAWN FACTS

**Extraneous mowers 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 lawns 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 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 this your lawn? Is there an alternative? What's wrong with this picture?

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

Sector	%
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%

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?

#### RESOURCES

- Backyard Actions for a Cleaner Chesapeake Bay:**  
[www.mdc.state.md.us/www/gicumd.edu](http://www.mdc.state.md.us/www/gicumd.edu)
- Healthy Habits for Clean Water:**  
<http://www.epa.gov/npdes/stormwater>
- Environmental Lawn Care - Grasscycling:**  
[www.grasscycling.asddep.com](http://www.grasscycling.asddep.com)

- Envirocast: Weather and Watershed Newsletter.**  
The Grass Crop of the Chesapeake Bay Watershed  
[www.stormcenter.com/envirocast/2003-05-01/envirocast.php](http://www.stormcenter.com/envirocast/2003-05-01/envirocast.php)
- Reducing Turf**  
Grow It! Don't Mow It! Wild Ones Website  
[www.for-wild.org](http://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 great lawns. Here 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 retrace 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 applications until the next dry period.

##### • Never apply herbicides or insecticides within 5 feet of pavement.

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, pyrethrin, 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 handiwork 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 shrank 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 Regulation Section.



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## 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.checonet.org/healthhouse/education/>
- Los Angeles County Department of Public Works  
<http://7adpo.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**

- Galam  
[www.galam.com](http://www.galam.com)  
Carries 7th Generation products, available in bulk quantities, 877-989-6321
- Green Home  
[www.greenhome.com](http://www.greenhome.com)  
Has a wide selection of cleaning products, 877-262-6400

**REFERENCES**

- Household Products Database  
<http://fpd.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](http://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

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.

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

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## To Clean or Deodorize...

TO CLEAN OR DEODORIZE...	TRY...
Windows and windshields	Club soda
Tubs, sinks, and toilet	Paste of baking soda, castile 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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## 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.

### 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 also 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.

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## Harvesting Rainwater using Rain Barrels

**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, uneven 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



## Tips for Green Leaders

FREDERICK COUNTY



### Gardening with Native Plants

#### Why Choose Native Plants?

— Teresa Gallion, M.G., Wildlife Gardening Adventures

From the streamside wetlands to the mountaintop forests, thousands of plant species contribute to the diverse ecosystems of Frederick County. They provide wildlife with food, shelter, and places to raise their young, and they keep our water clean. These diverse plant communities are the foundation of all ecosystems—including those in your yard.

Native plants established their habitats without being dispersed large distances by humans. We can use this definition to easily judge what is native. Plants that were growing in the continental United States before Europeans arrived are considered native. Because native plants have been part of their habitats for so long, they are naturally adapted to the local environment and are often more disease-, flood-, and drought-resistant than non-natives. You can reintroduce and conserve our native plant species by including them in your home gardens. You will be protecting our natural resources because your garden will require fewer chemicals, less water, and less maintenance. Planted in the proper location, natives are very low-maintenance.



Spring bloom of a native redbud

A little research can save you a lot of trouble. Think about the vast diversity of the mid-Atlantic region; coastal grasses would not survive in a woodland garden of the Calocott Mountains.

Choose native plants that reflect the conditions of your specific area. A well drained, full sun location is perfect for the butterfly-attracting dense blazing star (*Liatris spicata*), while the moisture-tolerant cardinal flower (*Loebelia cardinalis*) will do well along the edge of a pond.

Most nurseries carry some native plants, and some nurseries specialize in native plants. Some plants will be more readily available than others will. If you have a favorite that you can't obtain, be sure to ask your local nursery to consider adding it to their stock.

Native plants should not be removed from the wild unless an area is about to be developed. Even then, it is difficult to transplant wild collected plants and to duplicate their soil and other growth requirements in a home garden. Plants that are grown from seed or cuttings by nurseries have a much greater tolerance for garden conditions. Help to preserve natural areas by purchasing plants that have been grown, not collected.

#### Non-Native Plants

Non-native, invasive, or exotic plants introduced from other parts of the world have degraded many natural ecosystems. Some of these non-native plants were brought here intentionally for their medicinal, ornamental, or food value. Others hid in soil, crop seed, or ballast water. Although many non-native plants are considered beneficial and containable, it is difficult for most gardeners to know the risks of every ornamental plant. Some introduced plants have few or no natural measures of control or competition. Invasive plants spread rapidly and out-compete native vegetation, and few species of wildlife eat them. Ecosystems impacted by invasive, non-native plants have a reduced ability to clean our air and water, stabilize the soil, and provide wildlife habitat.

##### Common Invasive Species of Maryland:

###### Vines:

Mile-a-Minute (*Polygonum perfoliatum*)  
Oriental Bittersweet (*Celastrus orbiculatus*)  
Japanese Honeysuckle (*Lonicera japonica*)  
English Ivy (*Hedera helix*)

###### Shrubs:

Multiflora Rose (*Rosa multiflora*)

###### Grasses:

Japanese Stiltgrass (*Microstegium vimineum*)  
Common Reed (*Phragmites australis*)

###### Trees:

Tree of Heaven (*Ailanthus altissima*)  
Norway Maple (*Acer platanoides*)  
Autumn Olive (*Elaeagnus umbellata*)

###### Herbaceous plants:

Japanese Knotweed (*Polygonum cuspidatum*)  
Garlic Mustard (*Alisma petiolata*)  
Canada Thistle (*Cirsium arvense*)  
Bull Thistle (*Cirsium vulgare*)

## Tips for Green Leaders

FREDERICK COUNTY



### Design and Construction of a Rain Garden

#### Rain, Rain - Soak In!



Like our roofs and driveways, turf often prevents rainwater from soaking into the ground.

A novel alternative to the conventional recharge groundwater. Rain gardens are suitable for any land use—residential, commercial, or industrial. In a rain garden, rainwater from paved surfaces, downspouts, and lawns is collected in shallow, low-lying areas planted with native vegetation to be stored temporarily, absorbed by plants, and percolated into the ground. Pollutants such as fertilizer, pesticide residue, oil, and heavy metals can be trapped by the rich soil and root systems in the rain garden, permitting cleaner water to slowly soak down through the soil and rocky subsoil until it recharges groundwater supplies.

Native plant species that can tolerate the extremes of wet soils and dry periods are preferred for use in a rain garden. They are deep-rooted, adapted to the local climate, and attractive to pollinators, nectar-feeders, and other wildlife. Many of these native plants are sold by local nurseries, where experienced horticultural staff can help match suitable plants with your rain garden needs. You will need to consider sun exposure, soil type, soil moisture retention, and drought resistance when selecting plants.

##### Rain Garden Benefits

A rain garden can be your personal contribution to cleaner water, healthier wildlife, and an improved environment for you and your community. Each rain garden may seem small, but collectively they produce substantial environmental benefits.

- Increasing the amount of water filtering into the ground. This recharges groundwater and helps reduce the amount of pollutants washing off into lakes and streams.
- Helping to sustain adequate flows in streams during dry spells.
- Providing valuable wildlife habitat.
- Enhancing the beauty of your yard and the neighborhood.
- Protecting communities from flooding and drainage problems.
- Protecting streams and lakes from damaging flows that cause bank erosion.
- Reducing the need for costly stormwater treatment structures.

#### Resources:

##### Rain Garden Design:

- Chesapeake Ecology Center  
[tinyurl.com/39u5gm1](http://tinyurl.com/39u5gm1)
- RainScaping.org  
[www.rainscaping.org/](http://www.rainscaping.org/)

- Low Impact Development Center  
[www.lowimpactdevelopment.org/raingardens\\_design/index.htm](http://www.lowimpactdevelopment.org/raingardens_design/index.htm)
- Wisconsin Department of Natural Resources  
[tinyurl.com/y8m6r2n](http://tinyurl.com/y8m6r2n)
- Iowa Stormwater Partnership  
[tinyurl.com/7f4o79c](http://tinyurl.com/7f4o79c)

##### Native Plant Guides:

- U.S. Fish & Wildlife Services  
[www.nativelandcenter.net/guides/chesapeake/natives.pdf](http://www.nativelandcenter.net/guides/chesapeake/natives.pdf)
- Mountain Region Guide:  
[tinyurl.com/k7p2h2z](http://tinyurl.com/k7p2h2z)
- Piedmont Region Guide:  
[tinyurl.com/cml7ad3](http://tinyurl.com/cml7ad3)
- BayScapes Program  
[tinyurl.com/ctw7g2e](http://tinyurl.com/ctw7g2e)

#### Tidbits

In 1994, President Clinton recognized the natural landscaping movement by issuing an Executive Memorandum that presented guidelines for the use of natural landscaping at federal facilities. The use of native plants around the Vice Presidential mansion is one example of how the government implemented this new mandate.



Use of pesticides may kill beneficial pollinators, like the monarch butterfly.

Pesticides are often wrongly applied at times when target insects are not vulnerable. Overuse and inappropriate use can kill beneficial insects and other wildlife; less than 10% of all insects are harmful to plants. Pesticides may also cause serious human health problems when handled improperly. You can decrease the use of chemicals by planting native plants, which are so well-adapted to their native ecosystems that they often do not require extra nutrients or protection from pests.

Planting drought-resistant plants in your yard reduces the amount of watering required to keep the plants healthy. The U.S. Environmental Protection Agency estimates that a household can save 20-50% of their outdoor watering needs by converting to a water-efficient landscape through the use of drought-resistant plants and careful design. Many native plants are drought resistant. Consult a native plant guide to decide which plants to use.



Americans use 300 million gallons of gas each year to mow lawns.

According to the U.S. Environmental Protection Agency, Americans mow 31 million acres of lawn every year. It takes 300 million gallons of gas and 1 billion hours to complete the chore. And for this privilege they will spend \$17 billion on everything from pesticides (70 million pounds) to lawn tractors. Grass clippings consume an estimated 25 to 40% of landfill space during the course of the growing season in many U.S. suburban communities.

#### Resources:

**Native Plants and Natural Landscaping:**  
[Alliance for the Chesapeake Bay, Bayscapes](http://allianceforthebay.org/library/publications/bayscapes/)

**Lady Bird Johnson Wildflower Center**  
[www.wildflower.org/explore/](http://www.wildflower.org/explore/)

**Maryland Native Plant Society**  
[www.mdflora.org](http://www.mdflora.org)

**U.S. Fish and Wildlife Service**  
<http://www.fws.gov/chesapeakebay/BayScapes/bresources/bn-nativeguides.html>

**Wild Ones - Native Plants, Native Landscapes**  
[www.for-wild.org](http://www.for-wild.org)

**Audubon Society of Central Maryland**  
[www.centralmd.audubon.org/index.htm](http://www.centralmd.audubon.org/index.htm)

**Invasive Species:**  
**The Maryland Invasive Species Council**  
[www.mdinvasivesp.org/index.html](http://www.mdinvasivesp.org/index.html)

**The Maryland Department of Natural Resources**  
<http://dnr2.maryland.gov/invasives/Pages/default.aspx>

**The University of Maryland, Home and Garden:** <https://extension.umd.edu/hgic>

**Planting Native Programs:**  
**Growing Native**  
<http://potomac.org/growing-native/>

**Marylanders Plant Trees Program**  
[www.trees.maryland.gov/](http://www.trees.maryland.gov/)

**National Wildlife Federation Backyard Wildlife Habitat Program**  
[www.nwfw.org/backyardwildlifehabitat/](http://www.nwfw.org/backyardwildlifehabitat/)



The Tips for Green Leaders in Frederick County is a public outreach component of the Frederick County Office of Sustainability and Environmental Resources' Green Homes Challenge (GHC). For more information about the GHC please visit: [www.FrederickCountyMD.gov/GreenHomes](http://www.FrederickCountyMD.gov/GreenHomes) or call 801.600.7414.

#### Constructing a Rain Garden

Key steps in the process include choosing a location, sizing, designing the garden, checking for utility lines, installing the garden, and maintenance. You might decide to do all or some of the steps yourself, or you might select a professional landscaper to help.

1. Choose a location. There are several ways to choose a rain garden location. Low-lying areas that collect water or areas that stormwater usually travels across can become rain gardens. Other options include constructing a garden that collects runoff from a parking lot or redirecting flow from gutter downspouts to a garden. Keep the rain garden about 10-15 feet from buildings.



This rain garden has an attractive curved shape and brightly colored flowering plants.

2. Determine soil type, size, and depth. Determine whether your soil is clay, silt, or sand based on its texture. For clay soils in particular, you will probably want to use an amended soil in your garden consisting of 50-60% sand, 20-30% topsoil, and 20-30% compost. If you use amended soil, your garden should be 20-30% of the size of the drainage area. To determine drainage area, multiply the length by the width of your roof, driveway, or other surface draining into your rain garden. Rain gardens can range from 3-12' in depth, depending on the size of the garden. A deeper depth can allow for a smaller area garden. The most important factor to consider is making your garden deep enough to hold rainwater while it soaks into the ground. For a more detailed guide to determining soil type, garden area, and garden depth, see p. 11 of Rain Gardens Across Maryland: <https://extension.umd.edu/learn/rain-gardens-across-maryland>.

3. Creating a site design. Your rain garden can be any shape that you want. Use native plant guides to select plants appropriate for your garden, based on its exposure to the sun, moisture level, and soil type. Rain gardens installed in Frederick County will need to be adapted to either the Piedmont or Mountain region of the Chesapeake Bay Watershed. For a guide to plant selection by region, see the U.S. Fish & Wildlife Service's guide: [www.nativelandcenter.net/guides/chesapeake/natives.pdf](http://www.nativelandcenter.net/guides/chesapeake/natives.pdf).



Your rain garden can be as beautiful as you decide to make it. This garden directs downspout water to a simulated stream bed.

Image used under Creative Commons from Field\_Outdoor\_Spaces

4. Check for utility lines and pipes. Call Miss Utility at 1-800-257-7777 at least one week prior to digging.
5. Install the garden. Use a hose or rope to create an outline of your rain garden. Excavate by hand or machine to your pre-determined depth and build a berm using excavated soil if necessary. Fill the area with soil amendment, leaving a few inches for mulch. Remove plants from containers, loosen their roots, and plant them in the amended soil. Follow with a layer of mulch and watering.
6. Maintenance. Maintenance for rain gardens is essentially the same as that for other landscaping. Water your garden about one inch per week during dry spells. Replace soil or mulch if it gets washed out by heavy rains. Trim plants, remove dead vegetation, and remove weeds if needed.



The Tips for Green Leaders in Frederick County is a public outreach component of the Frederick County Office of Sustainability and Environmental Resources' Green Homes Challenge (GHC). For more information about the GHC please visit: [www.FrederickCountyMD.gov/GreenHomes](http://www.FrederickCountyMD.gov/GreenHomes) or call 801.600.7414.

### **BMP 1.5 – Reporting to the Maryland Department of the Environment (MDE)**

- ***Requirement:*** Describe in reports to MDE how the education programs facilitate the permittee's efforts to reduce pollutants in stormwater runoff.
- ***Action Plan:*** Distributing general education brochures will help educate individual and households about stormwater runoff, personal behaviors to reduce runoff pollution, volunteer opportunities, illicit discharge detection, and understanding of the legal implications of the improper disposal of waste.



**Town of Emmitsburg**

**Minimum Control Measure #2**

**Public Involvement and Participation Program (PIPP)**

Latest Revision: 10/30/2018

## **Minimum Control Measure (MCM) #2 Public Involvement and Participation**

### **Introduction**

As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Public Involvement and Participation Program (PIPP) is to create and foster opportunities for public participation in the MS4 management program for controlling stormwater discharges.

### **BMP 2.1 – Target Audience**

- **Requirement:** Determine the target audience within the jurisdiction to promote public involvement and participation activities.
- **Action Plan:** The Town has identified residents, homeowner associations, businesses, environmental groups, elected officials, and municipal employees as the target audience groups. Public involvement is promoted through the Town Office, Town website, cable channel 99 (local government channel), Facebook, Twitter, and through the Town's newsletter that is attached to water and sewer bills.

### **BMP 2.2 – Appropriate Activities**

- **Requirement:** Specify activities appropriate for the target audience and promote participation.
- **Action Plan:** In the 2018 reporting period, the Town identified the following opportunities for public participation in the MS4 management program for controlling stormwater discharges: Willow Rill Stream Reforestation Phase 1, two Emmitsburg Volunteer Community Clean-Up Days, Cigarette Litter Prevention Program, and an affordable compost bin purchasing program.

### **BMP 2.3 – Public Participation Events**

- **Requirement:** Perform at least five public participation events during the permit term (at least 1 per year) and report to MDE in accordance with reporting requirements.
- **Action Plan:** In the 2018 reporting period, the Town held the following events that provided opportunities for public participation in the MS4 management program for controlling stormwater discharges: Willow Rill Stream Reforestation Phases 1 & 2, two Emmitsburg Volunteer Community Clean-Up Days, Cigarette Litter Prevention Program, and an affordable compost bin purchasing program.

Willow Rill Stream Reforestation: The Emmitsburg Community Park is a 5.5 acre park located on W. Lincoln Avenue in Emmitsburg. The park contains part of Willow Run, a stream, which flows through the Town's Memorial Park and Emmitsburg Elementary School Property. The Town's Willow Rill Stream Reforestation project objectives



included: 1) provide increased water quality and habitat diversity; 2) provide increased awareness and promote public participation in the MS4 management program for controlling stormwater discharges; 3) maintain the tree canopy and aesthetic nature of the park; and 4) provide for more diversity of native species appropriate to the site. This project was completed in two phases.

- On April 28, 2018, the Town of Emmitsburg held the first ever Arbor Celebration and tree planting. The event was held in Community Park along Willow Rill, a creek that runs through the park and is in desperate need of restoration. The section of the creek that runs through Community Park had little to no wild life and no brush or trees to help control flow during heavy rains. The Town planted 12 total trees (5 Red Maples, 5 River Birch, and 2 White Oaks) with the assistance of members from the Emmitsburg Green Team, Town Staff, Boy Scout Troop 727, Mount Saint Mary's University Rugby Team, FEMA, Lions Club, Department of Natural Resources (DNR), County Executive's Office and several other local organizations. There was no charge to participate. The project was funded through a \$1,380.00 DNR grant called the Maryland Urban & Community Forestry Council grant. The event was advertised on Facebook, the Town Newsletter, Town website, flyers, email invitations and word-of-mouth. In total, sixty people attended the event. Photos are attached showing the event flyer and the group that participated.











Emmitsburg Volunteer Community Clean-Up Days: The Town sponsored two community clean-up days in 2018. Residents gathered to pick-up and properly dispose of loose trash and litter from the parks, roads, waterways, and alleys in the downtown area. The group met at Memorial Park for a light breakfast and organized into teams. Plastic bags, gloves, and garbage pokers were provided by the Town.

- July 14, 2018 – Nine community members collected and properly disposed of approximately 100 pounds of trash and litter out of the roadways, waterways, and other areas throughout the Town.



# Community Volunteer **CLEAN-UP DAY** **HELP EMMITSBURG!**

## **What?**

We are planning to pick up and dispose of loose trash and litter from the parks, roads, and alleys in the downtown area.

## **When?**

Saturday, July 14, 2018  
from 9 AM - Noon



## **Where?**

Meet at the Community Park Pavilion at 8:15 AM for a light breakfast before we start!

Garbage bags, gloves, and trash-pokers will be provided.

*See You  
There!*





- August 11, 2018 – Six community members collected and properly disposed of approximately 25 pounds of trash and litter out of the roadways, waterways, and other areas throughout the Town.

## Community Volunteer **CLEAN-UP DAY** HELP EMMITSBURG!

### What?

We are planning to pick up and dispose of loose trash and litter from the parks, roads, and alleys in the downtown area.



### When?

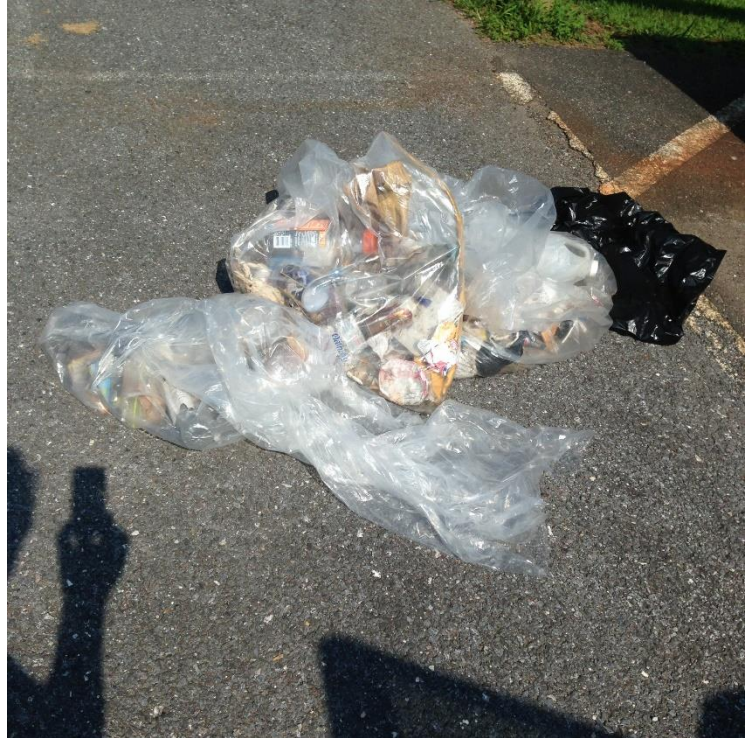
Saturday, August 11, 2018  
from 8:15 AM - Noon

### Where?

Meet at the Memorial Park  
(behind Post Office) at 8:15 AM for  
a light breakfast before we start!

Garbage bags, gloves,  
and trash-pokers will be provided.

*See You  
There!*





Cigarette Litter Prevention Program: The Town's square (intersection of Main Street and Seton Avenue) and Emmitsburg Community Pool) parking lot (201 West Lincoln Avenue) are notorious for cigarette litter. In order to avoid discarded cigarette litter from entering and polluting the stormwater system, the Town applied for and was awarded a \$2,500 grant from Keep America Beautiful. This funding was used to cover the purchase, shipping, and marketing of four cigarette receptacles for the downtown area, one wall mount receptacle for the community swimming pool, and the printing of 1,200 educational tri-fold brochures. The educational brochures were included with the September, 2018 water and sewer bills. The Town's Department of Public Works installed the ash receptacles and maintains them by emptying them on a bi-monthly basis.

The grant also provided 200 pocket and 200 auto ashtrays for resident and business distribution. The ashtrays are kept in the Town office and distributed for free as requested. Town staff will also have the ashtrays available at large Town events, such as Community Heritage Day and park events. Local businesses with a large amount of smoking customers (bars, etc.) will be asked if they would like the ashtrays to distribute to smoking customers. Emmitsburg markets the new receptacle locations and cigarette litter prevention facts on cable channel 99 (local government channel), Facebook, Twitter, the Town's website and at the monthly Town meetings.

**Auto Ashtrays >**





Pocket Ashtrays ^

## EMMITSBURG GRANT

In April 2018, the Town of Emmitsburg was awarded a \$2,500 grant from Keep America Beautiful. The grant funds will be used to keep Emmitsburg beautiful through the purchase of four cigarette receptacles along Main Street and one wall mount receptacle for the Community Pool. The grant also includes 200 pocket ashtrays and 200 portable auto ashtrays that are offered FREE to all residents. Stop by the Town Office to get yours.

We thank Keep America Beautiful for their generous contribution to our Town!



**Get the facts.  
Take responsibility. Do your part  
to reduce cigarette butt litter.**

Keep America Beautiful is working with communities across the U.S. to combat this problem through its Cigarette Litter Prevention Program.

**Find Out More At:**  
[www.PreventCigaretteLitter.org](http://www.PreventCigaretteLitter.org) Kab.org

## ABOUT KEEP AMERICA BEAUTIFUL, INC.

A leading national nonprofit, Keep America Beautiful inspires and educates people to take action every day to improve and beautify their community environment. We envision a country where every community is a clean, green, and beautiful place to live. Established in 1953, Keep America Beautiful provides the expertise, programs and resources to help people end littering in America, improve recycling in America, and beautify America's communities. The organization is driven by the work and passion of more than 600 community based Keep America Beautiful affiliates, millions of volunteers, and the support of corporate partners, municipalities, elected officials, and individuals. To learn how you can take action, visit [kab.org](http://kab.org), or follow them on Twitter, Instagram, Facebook, or view them on YouTube.



**Cigarette Litter  
Prevention Program**  
A KEEP AMERICA BEAUTIFUL INITIATIVE

300A S. Seton Avenue  
Emmitsburg, MD 21727  
Phone: 301-600-6300  
Email: [Info@Emmitsburgmd.gov](mailto:Info@Emmitsburgmd.gov)

## EMMITSBURG CIGARETTE LITTER PREVENTION

**The Facts About  
Cigarette Butt Litter**



Photo Courtesy: Clean VA Waterways



### IS A CIGARETTE BUTT LITTER?

When it ends up on the ground and not in a proper receptacle, a cigarette butt is litter. Partially smoked cigarettes, cigar tips, matches, disposable lighters, packaging, and cigarette butts are all part of our national litter problem.

Individuals, who would never litter beverage cans or paper packaging, typically don't consider tossing cigarette butts or cigar tips on the ground as littering. Lack of awareness, lack of ash receptacles, and ordinances that move smokers outdoors all increase cigarette butt littering.



### CIGARETTE BUTT LITTER AND YOUR COMMUNITY

Although it's one of the smallest pieces of litter, communities report cigarette butts, including cigar tips, are the top item collected during local clean-ups. All that litter has an impact on the places in which we live:

#### CREATING BLIGHT

Cigarette butt litter is unsightly. It accumulates in corners, gutters, and outside doorways and bus shelters. Litter in a business district, waterfront, on roadways and recreation areas, and other signs of disorder create a sense that no one cares about the community.

#### HARMFUL TO WATERWAYS

Littered cigarette butts and cigar tips are easily carried in storm water runoff through drainage systems and eventually to local streams, rivers, and waterways. Cigarette filters contain cellulose acetate, a form of plastic that does not biodegrade and can persist in the environment.

#### COSTLY TO CLEAN-UP

Cigarette litter requires additional sidewalk and street sweeping, greenway and park maintenance, and storm water system upkeep. Retailers, property owners, and municipalities also bear the expense of cigarette litter clean-up at entrances, exits, and adjacent sidewalks and parking lots.

#### DID YOU KNOW?

Tobacco litter represents nearly 34.4% of all litter in outdoor recreation areas such as picnic areas, hiking trails, parks, etc. decreasing the appeal of these natural areas.

### TIPS TO REDUCE CIGARETTE BUTT LITTER

Appropriate ash receptacles need to be available to smokers. Individuals who smoke must accept personal responsibility and choose not to litter.

#### HERE'S HOW YOU CAN HELP

Carry a portable or pocket ashtray when smoking outside. For a limited time, the Town Office will be handing out FREE car and pocket ashtrays. Contact the Town Office to get yours.

Use a proper receptacle to dispose of cigarette butts and cigar tips. Ash receptacles are needed at the places where people must stop smoking before they proceed. These are called "transition points." Ash receptacles at transition points remind smokers to properly dispose of cigarette butts.

Don't throw butts out car windows. Place cigarette butts and cigar tips in a car ashtray, a portable auto ashtray (which fits in the cup holder), or a container with a secure top.

Be aware of local litter ordinances. According to the Town Code (section 8.12.010), cigarette butts are considered litter. Accumulations of cigarette butts on a property are considered a municipal infraction punishable by a fine of seventy-five dollars (\$75.00) per day.

Educational tri-fold brochures ^

Compost Bins: According to the Environmental protection agency, composting has the following benefits related to stormwater: reduces and in some cases eliminates the need for chemical fertilizers; can help aid reforestation, wetlands restoration, and habitat revitalization efforts by improving contaminated, compacted, and marginal soils; provide cost savings over conventional soil, water and air pollution remediation technologies; and enhance water retention in soils.

In order to promote public participation in composting within the Town's jurisdiction, the Town submitted a purchase order to the Frederick City Department of Public Works on June 20, 2017 for the purchase of 40 compost bins provided by Backyard Composting. The bins were purchased for \$28 each and sold for \$20 each (price was determined by Backyard Composting). The Town advertised the bins on Facebook, the Town website, flyers around Town, and during Town community events. Anyone living within the Emmitsburg area (verified by photo ID) could purchase a bin by coming into the Town office. All 40 bins were sold by February 2018. The Town purchased another 20 bins in August 2018 in order to keep up with residential demand. A picture of the flyer is attached below.

## COMPOST BINS FOR \$20

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 contacting the Town Office or visiting the Town Website at [www.emmitsburgmd.gov](http://www.emmitsburgmd.gov).

*First-come, first-served*

Compost Bin Size:  
Height: 33 inches  
Width: 31 inches

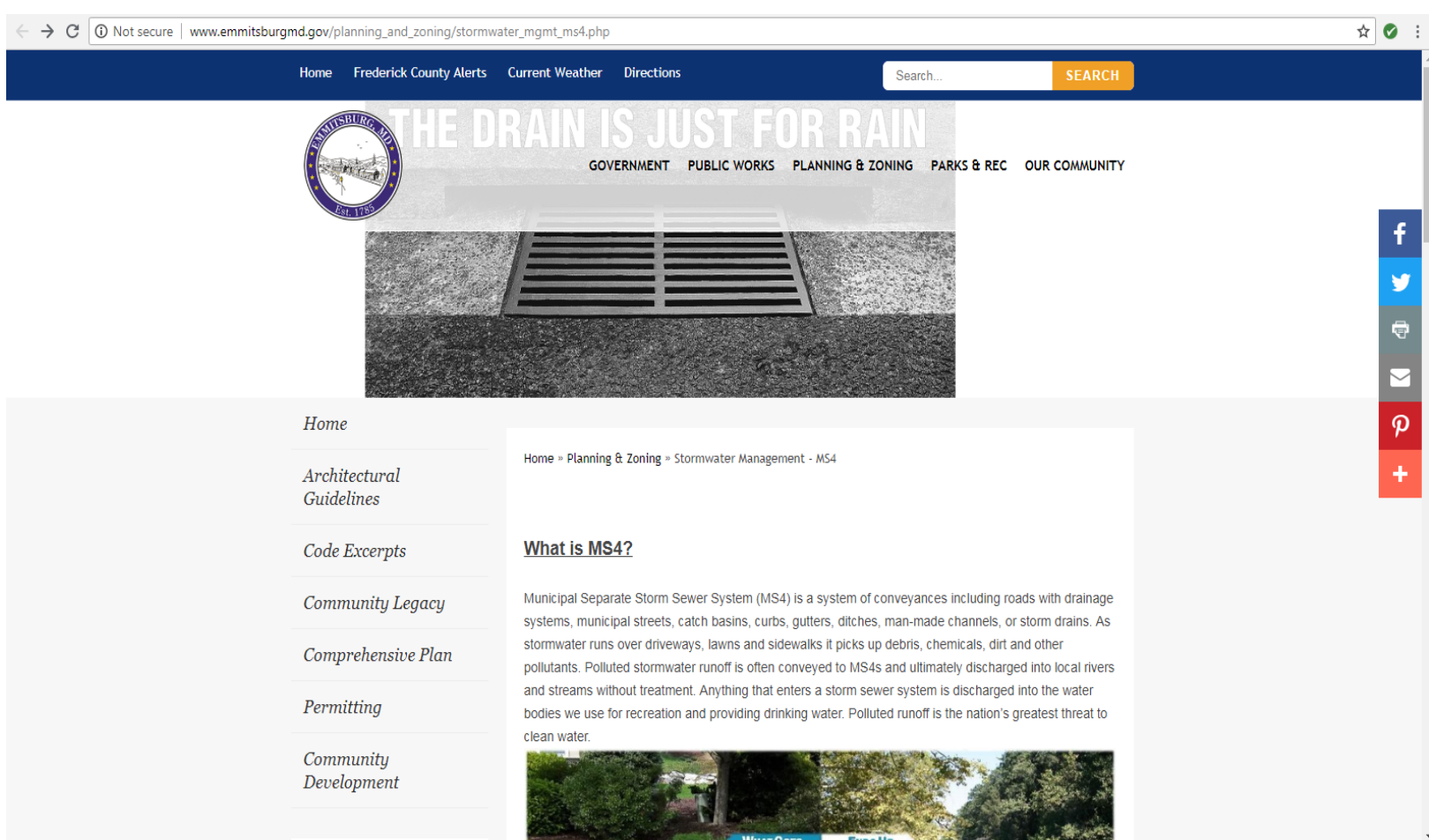


One piece bin with a top lid and sliding door.  
10-year warranty. Compost guide included.



## BMP 2.4 – Public Access

- **Requirement:** Provide public access to the permittee's progress reports via website or other method and consider any substantive public comments received concerning the jurisdiction's MS4 program.
- **Action Plan:** The Town has added a stormwater management page to their website, which can be located at [http://www.emmitsburgmd.gov/planning\\_and\\_zoning/stormwater\\_mgmt\\_ms4.php](http://www.emmitsburgmd.gov/planning_and_zoning/stormwater_mgmt_ms4.php). The page includes links to the Stormwater Annual Progress Reports, and other educational and environmental information. No public comments have been received to date. Below are pictures of the website.







stormwater runs over driveways, lawns and sidewalks it picks up debris, chemicals, dirt and other pollutants. Polluted stormwater runoff is often conveyed to MS4s and ultimately discharged into local rivers and streams without treatment. Anything that enters a storm sewer system is discharged into the water bodies we use for recreation and providing drinking water. Polluted runoff is the nation's greatest threat to clean water.



### Illicit Discharges

An illicit discharge is defined as any unauthorized discharge other than clean stormwater released into the Municipal Separate Storm Sewer System (MS4). Illicit connections may be intentional or may be the result of connections made years ago when water quality issues were not a concern.

The types of illicit discharges vary widely with some examples being:

- Waste oil, antifreeze, paint, trash or other household chemicals
- Car wash, laundry, and industrial wastewaters
- Spills on roadways and other accidents
- Failing septic systems and illegal dumping practices
- Improper disposal of sewage from recreational practices such as boating or camping

Common indicators of illicit discharges include abnormal odors, strange colors, or oil sheen present

- Waste oil, antifreeze, paint, trash or other household chemicals
- Car wash, laundry, and industrial wastewaters
- Spills on roadways and other accidents
- Failing septic systems and illegal dumping practices
- Improper disposal of sewage from recreational practices such as boating or camping

Common indicators of illicit discharges include abnormal odors, strange colors, or oil sheen present around or inside storm inlets or pipes. Keeping harmful substances out of our water benefits everyone; environmentally and economically.



**If you witness or become aware of an illicit discharge or illegal dumping, please contact:**

Zachary R. Gulden, MPA  
 Town Planner  
 Town of Emmitsburg  
 300A South Seton Avenue  
 Emmitsburg, MD 21727  
 Phone: 301-600-6309  
 Fax: 301-600-6313

Listed below are the six minimum control measures that the Town must incorporate into the stormwater management program. These measures are expected to result in significant reductions of pollutants discharged into receiving waterbodies.

1. **Public Education and Outreach** - An informed and knowledgeable community is crucial to the success of a stormwater management program, since it helps to ensure greater support and program compliance as the public becomes aware of individual actions they can take to protect or improve the quality of area waters.
2. **Public Participation/Involvement** - An active and involved community allows for broader public support, a broader base of expertise and a connection to other local environmental programs.
3. **Illicit Discharge Detection and Elimination** - Illicit discharges are untreated discharges that could contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses and bacteria to receiving waterbodies. The Town is required to develop, implement and enforce an illicit discharge detection and elimination program.
4. **Construction Site Runoff Control** - Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris, and chemicals and transport these to a nearby storm sewer system or directly to a river, lake or stream.
5. **Post-Construction Runoff Control** - Increased impervious surfaces, like parking lots, driveways, and rooftops, interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process can include stream bank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property. Ordinances and other regulations are required to determine the appropriate best management practices and to ensure adequate long-term operation and maintenance of storm water controls.
6. **Pollution Prevention/Good Housekeeping** - This measure involves recognizing the benefits of pollution prevention practices and includes the development and implementation of an operation and maintenance program. Reducing pollutant runoff from municipal operations into the storm sewer system can include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations.

## Links/Additional Information

### Annual Reports

- [01/2016 - 12/2017](#)
- [01/2018 - 10/30/18](#)

### Erosion and Sediment Control Ordinance

- [Town Code - Chapter 15, Section 20.010](#)
- [Frederick County Code - Chapter 24](#)

### Stormwater Management Ordinance

- [Town Code - Chapter 15, Section 21.010](#)
- [Frederick County Code - Chapter 28](#)

### Educational Materials

- [Composting - Do the Rot Thing](#)
- [Gardening with Native Plants](#)
- [Natural Household Cleaners](#)
- [Maintaining Your Lawn While Protecting Water Quality](#)
- [Harvesting Rainwater Using Rain Barrels](#)
- [Design and Construction of a Rain Garden](#)
- [Pet Waste Fact Sheet](#)



**Town of Emmitsburg**

**Minimum Control Measure #3**

**Illicit Discharge Detection and Elimination (IDD&E) Plan**

Latest Revision: 10/30/2018



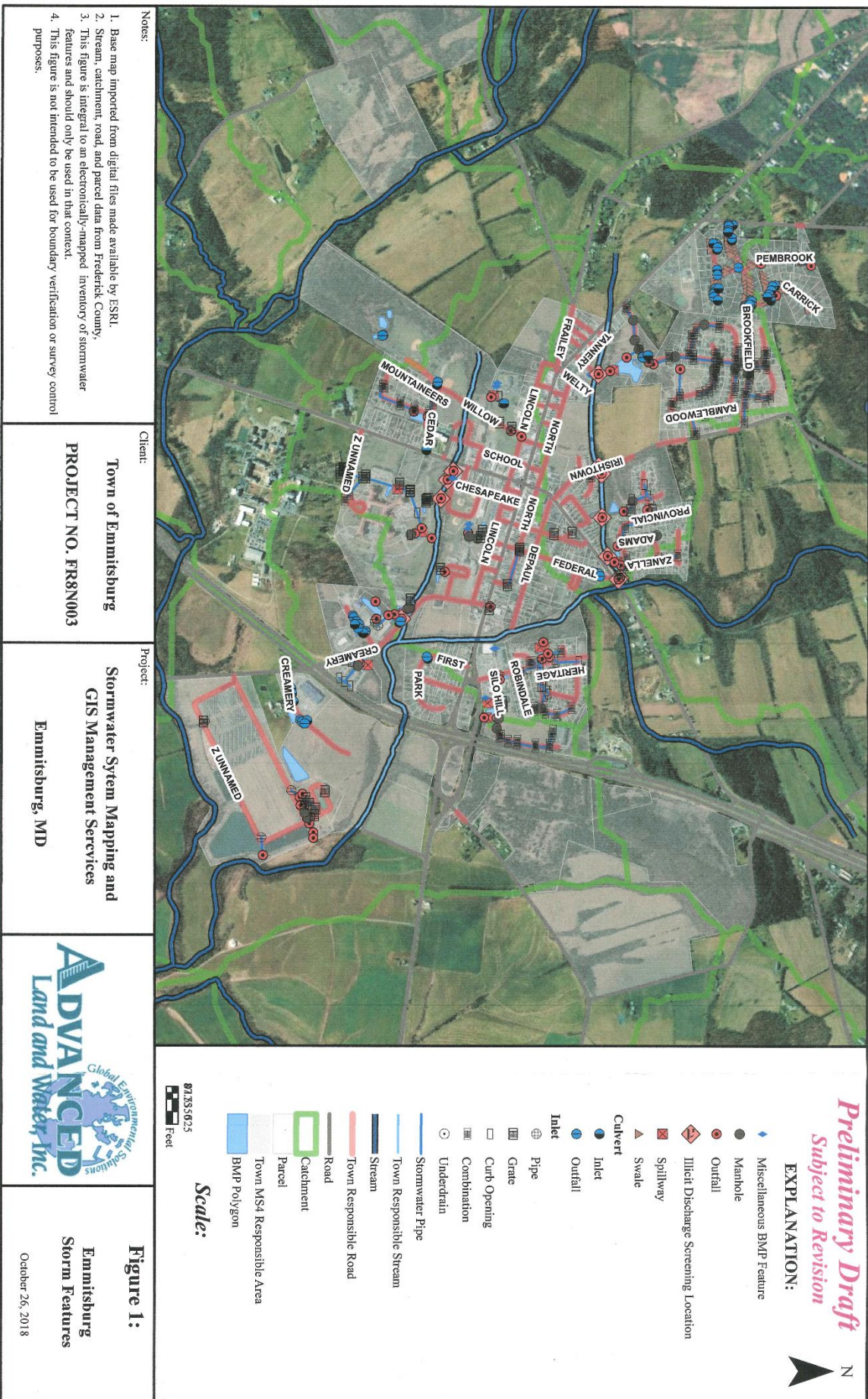
## **Minimum Control Measure (MCM) #3 Illicit Discharge Detection and Elimination (IDD&E) Plan**

### **Introduction**

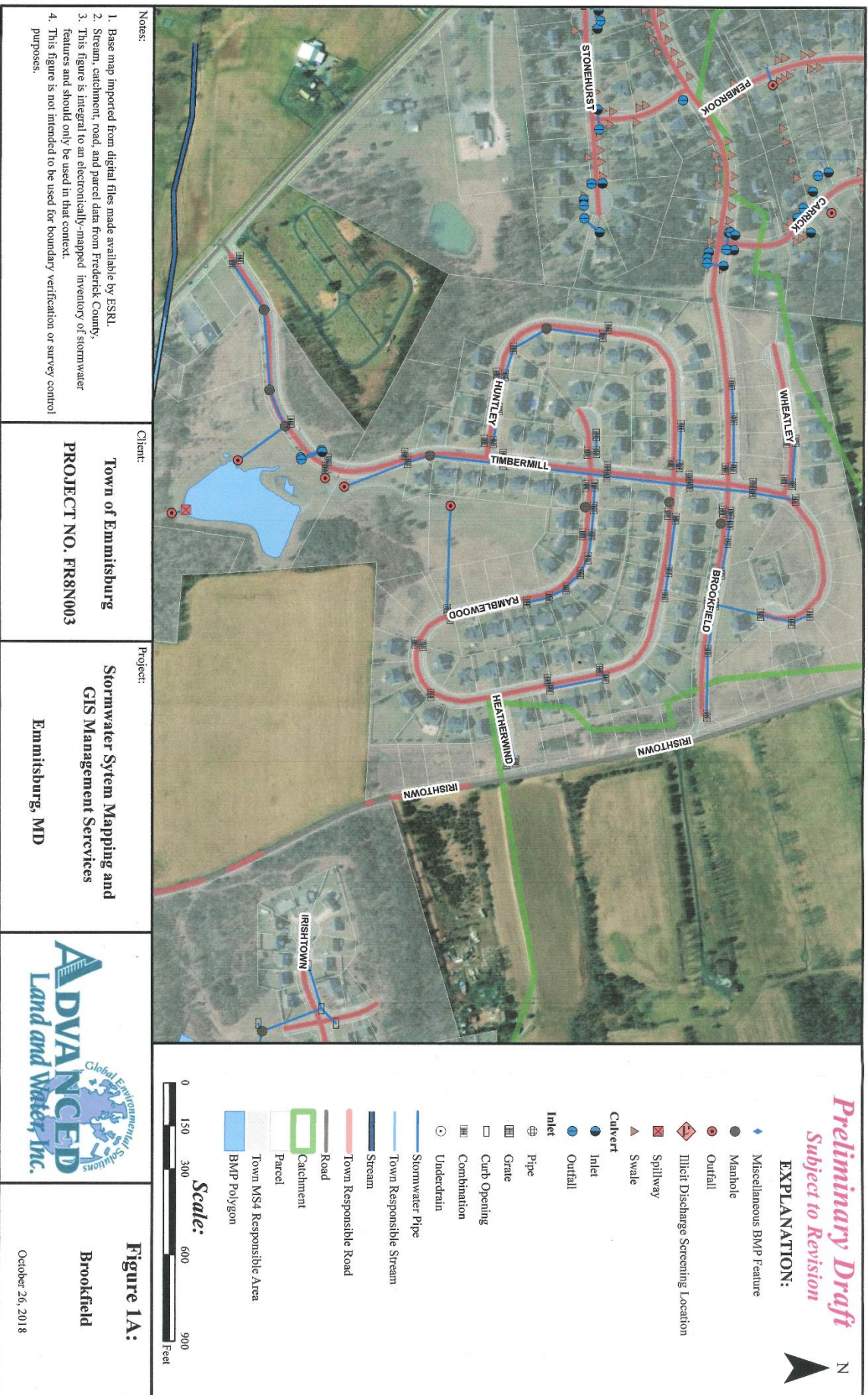
As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Illicit Discharge Detection and Elimination (IDD&E) Plan is to identify and eliminate illicit storm drain system discharges. A permittee will satisfy this MCM by field screening storm drain system outfalls, inspecting the storm drain system to identify any source of an illicit discharge, eliminating any illegal connection or illicit discharge to the storm drain system, and enforcing penalties where appropriate.

### **BMP 3.1 – Storm Drain Infrastructure Map**

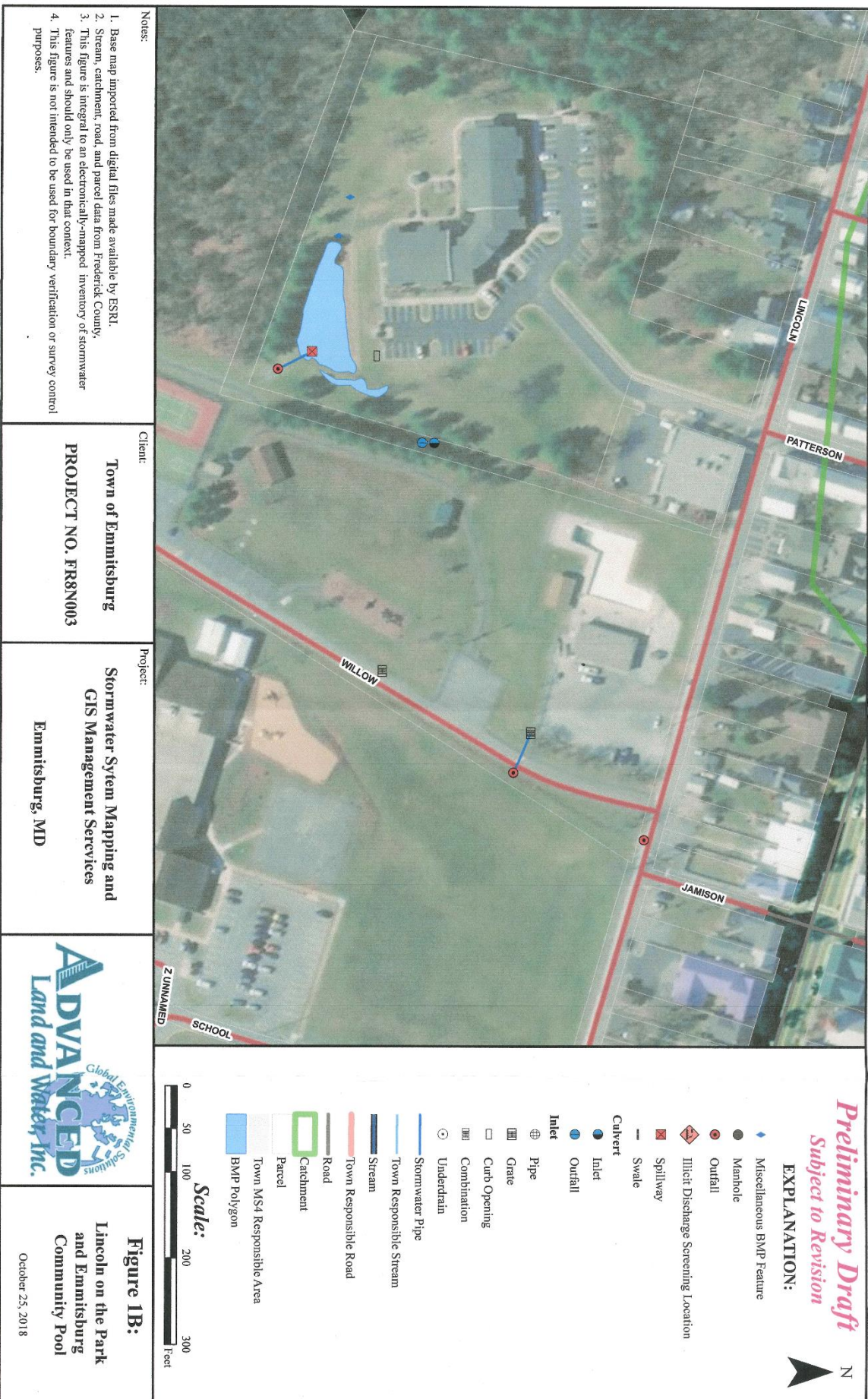
- **Requirement:** Maintain a map of the jurisdiction's storm drain infrastructure, which identifies all pipes, outfalls, inlets, stormwater management BMPs, illicit discharge screening locations, and surface waters.
- **Action Plan:** The Town contracted with Advanced Land and Water, Inc. of Eldersburg, MD to conduct this work in 2018. This cost the Town \$12,350.00.



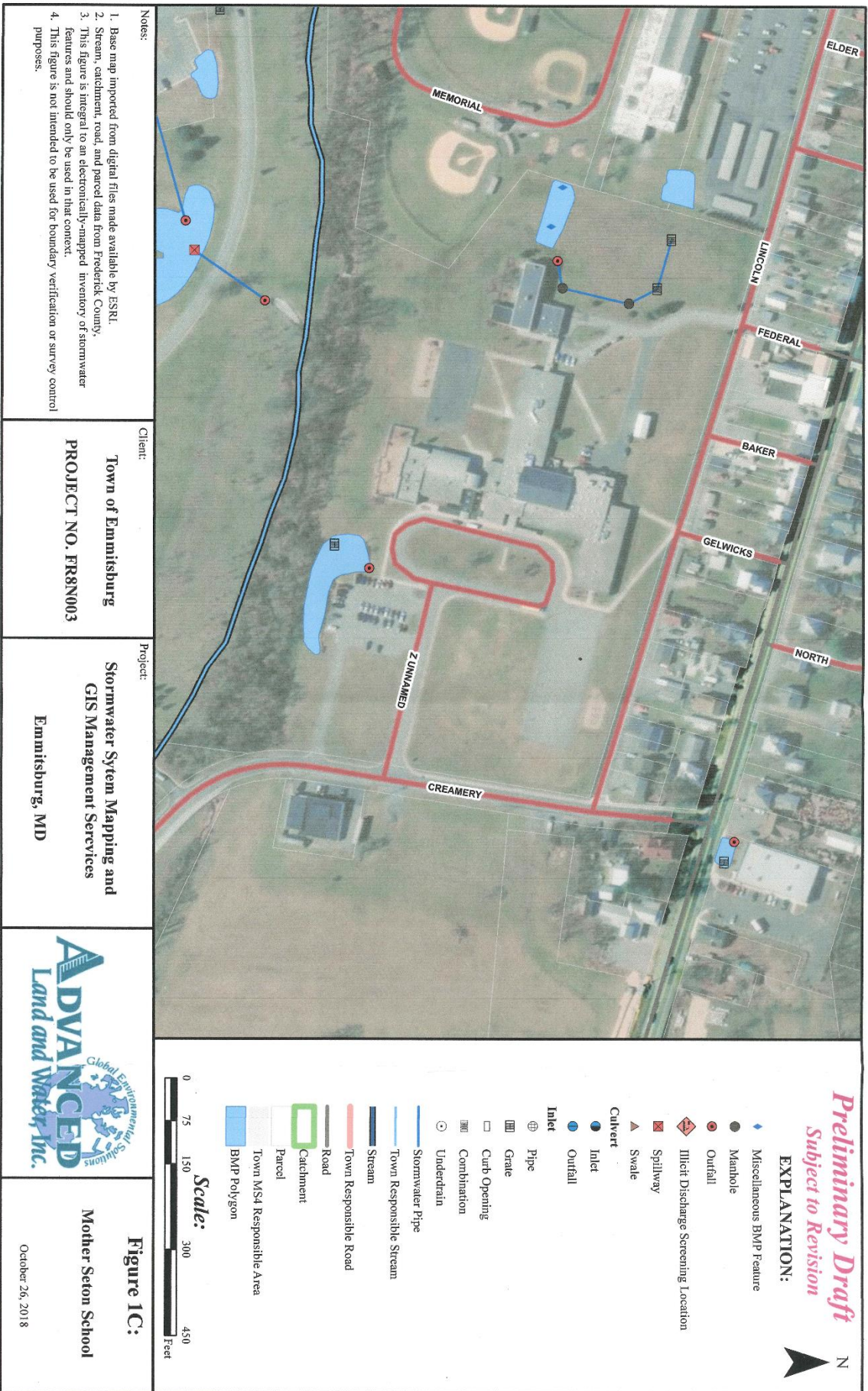




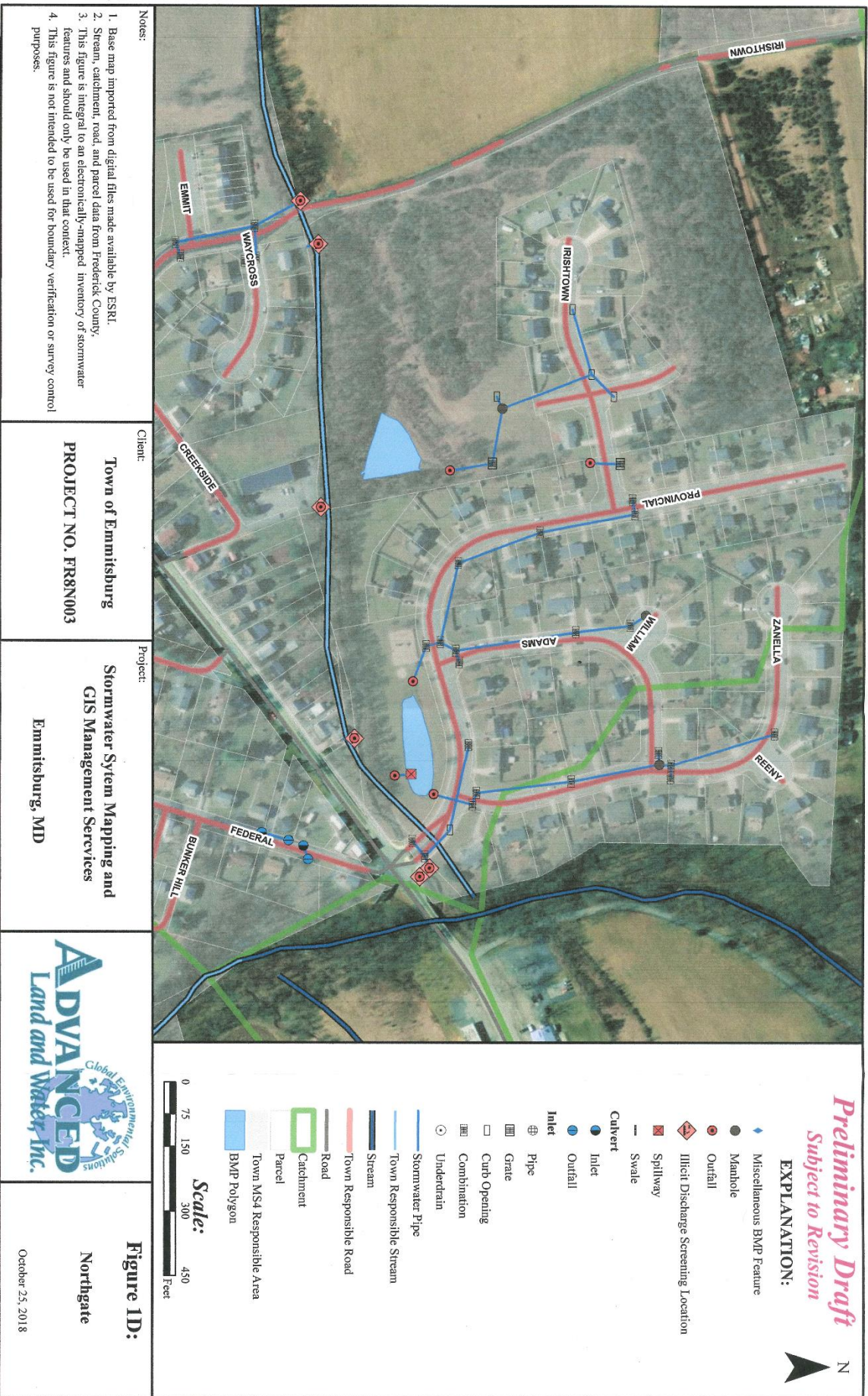




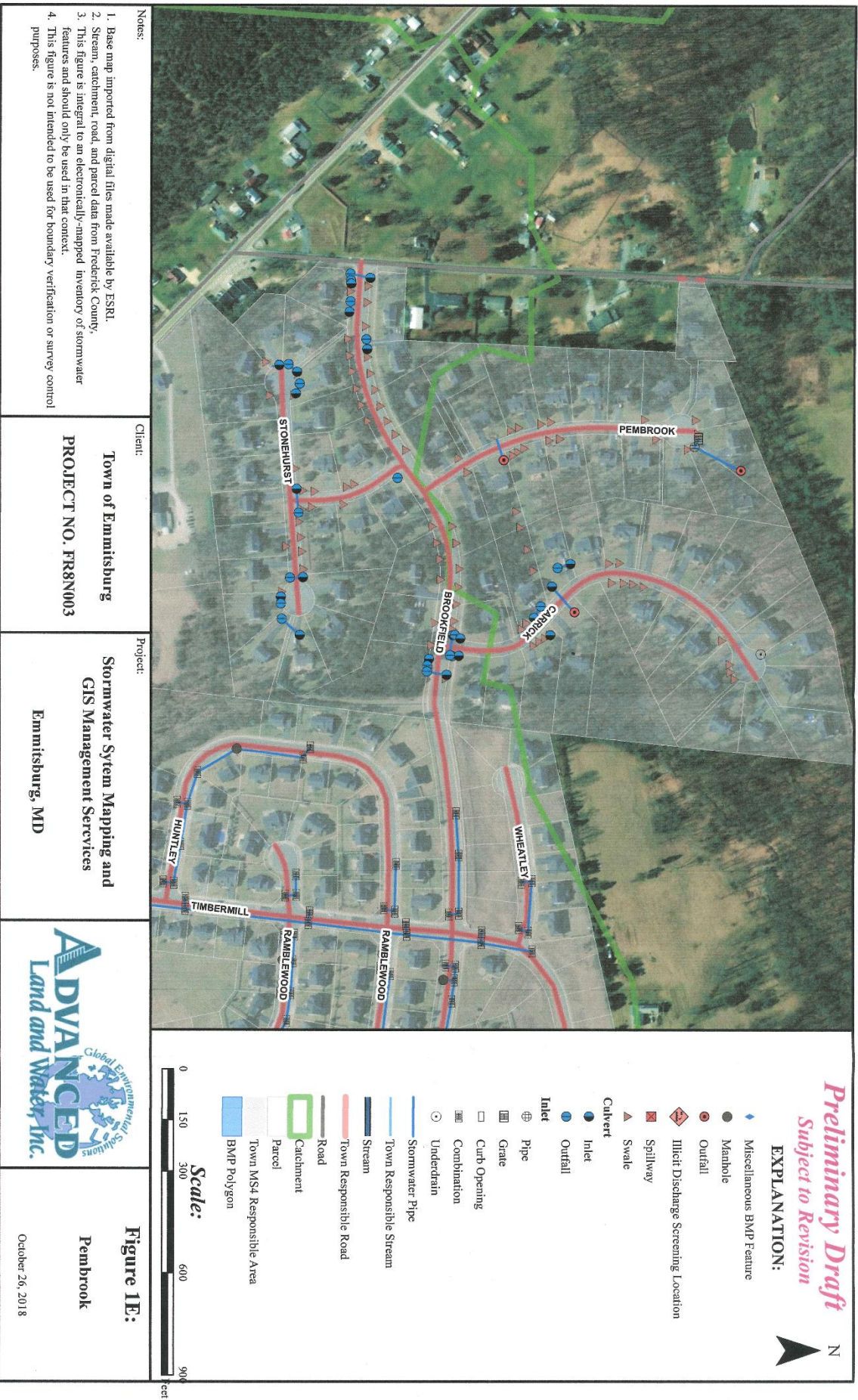




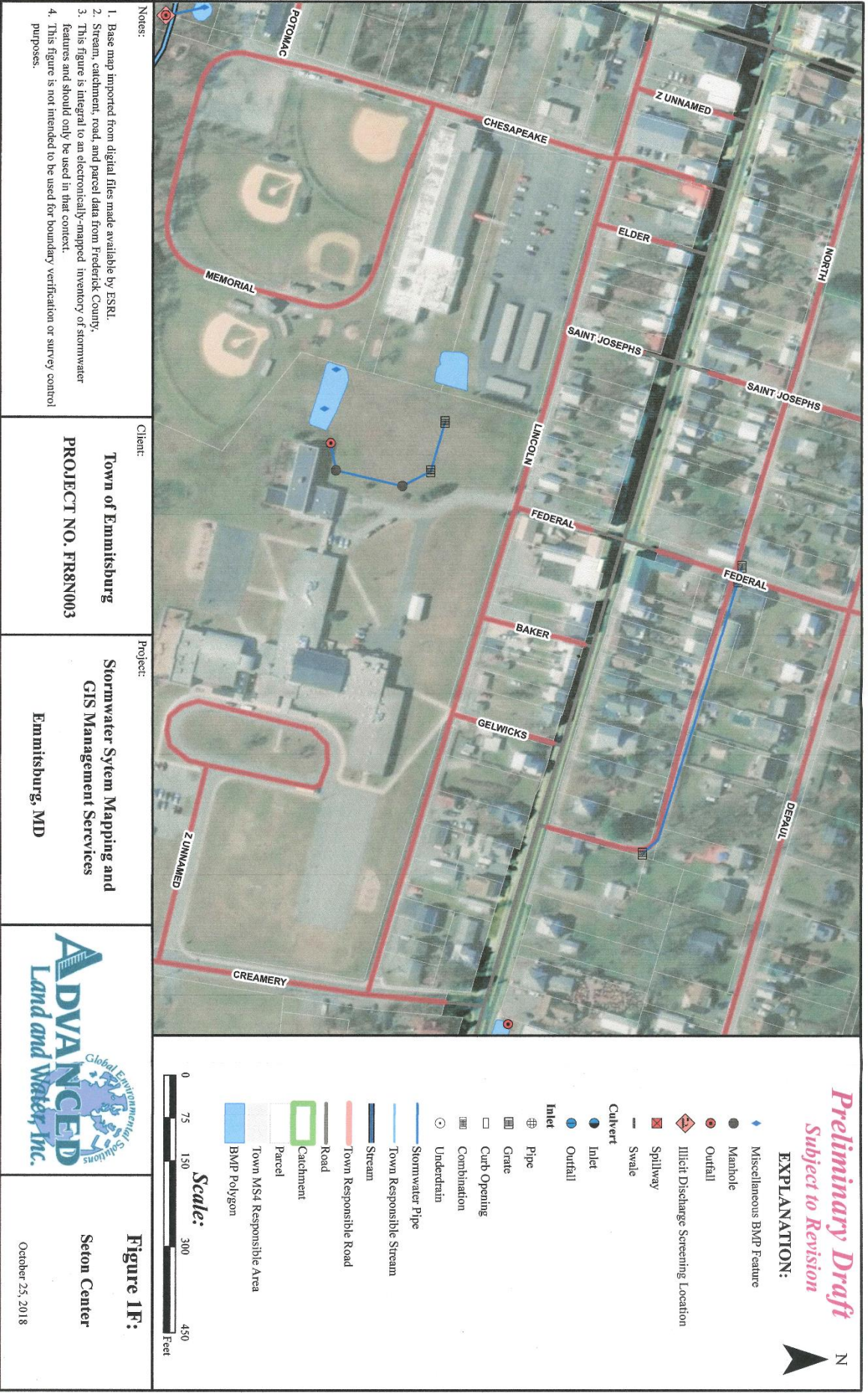




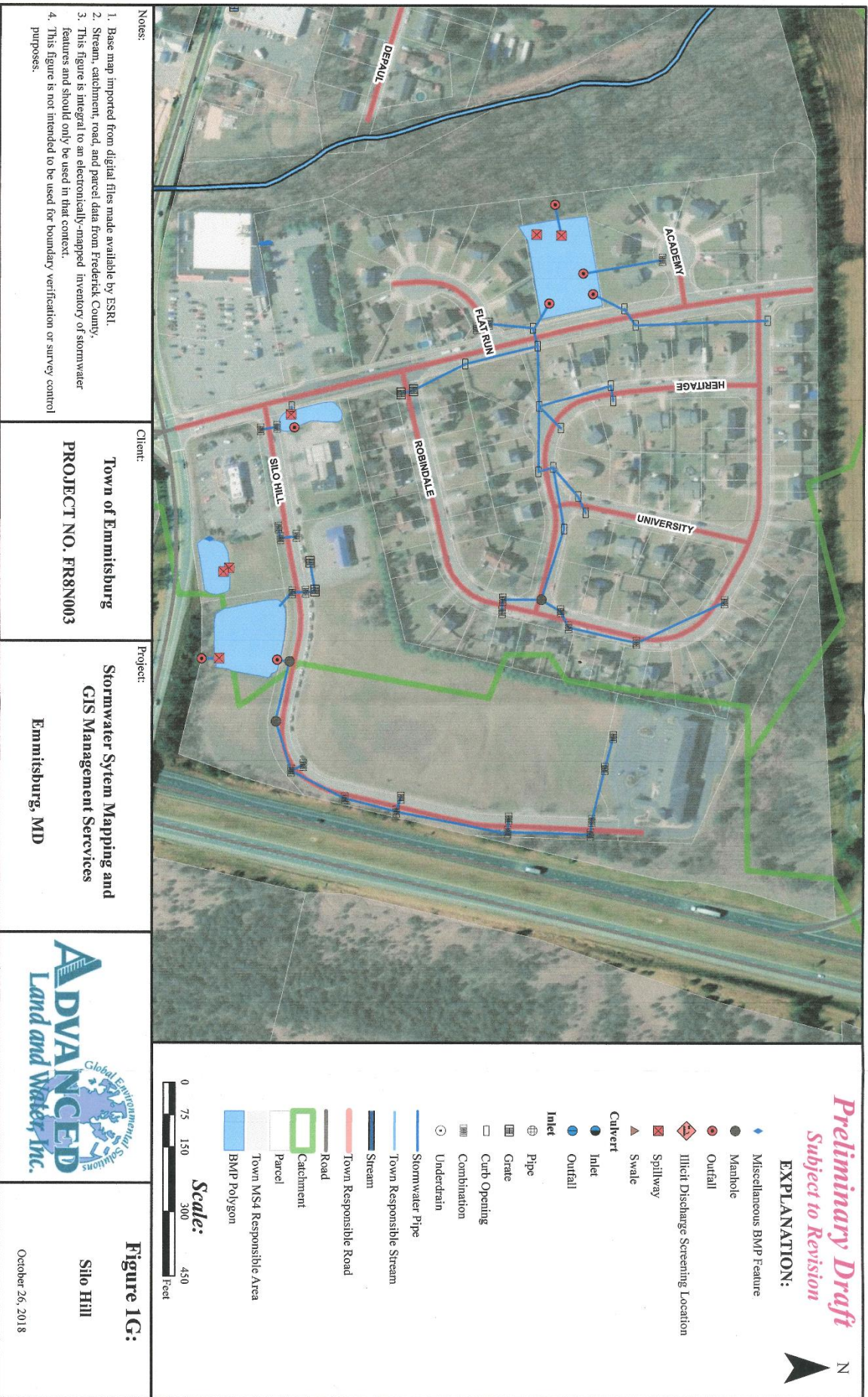








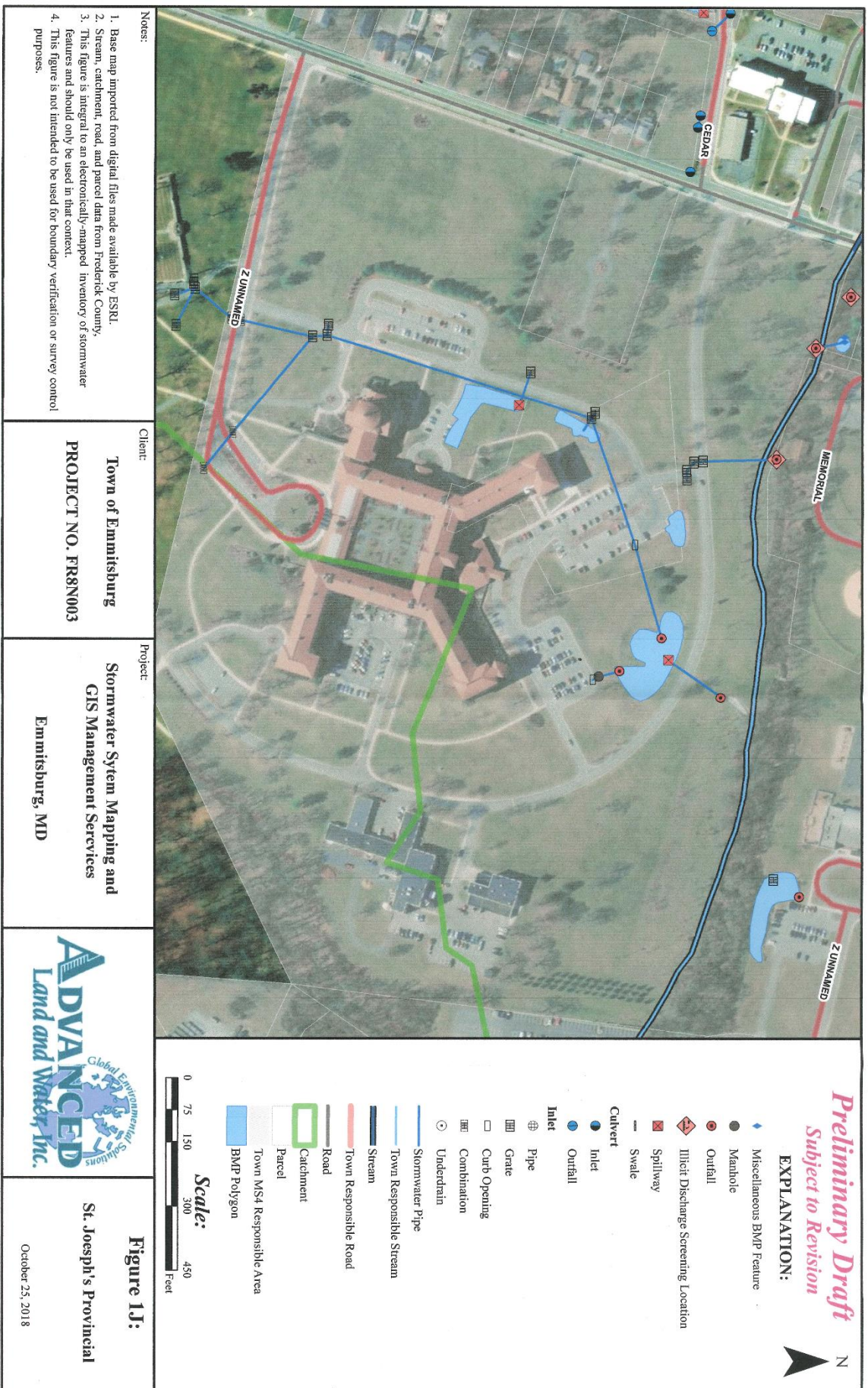




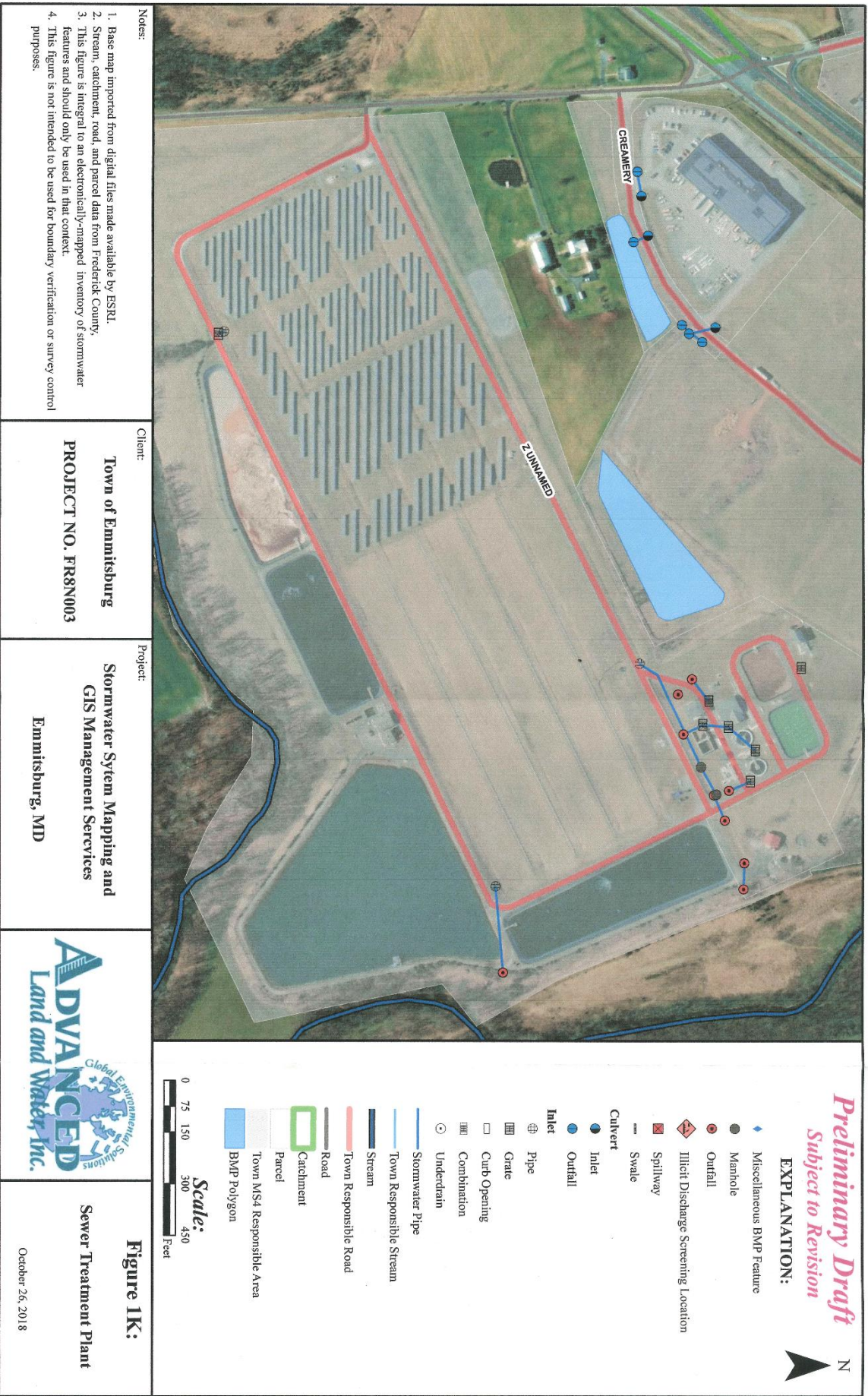














### BMP 3.2 – Illicit Discharge Ordinance

- **Requirement:** Adopt an ordinance, or other regulatory means, that prohibits illicit discharges into the storm sewer system.
- **Action Plan:** The Town adopted the County’s MDE approved Stormwater Management Ordinance through Town Ordinance No. 01-18. Section 28-20 of the Stormwater Management Ordinance prohibits illicit discharges into the storm sewer system. Please see Section 28-20 attached below:

8/16/2018

Frederick, MD Code of Ordinances

Sec. 28-20. - Prohibited Activities.

(a) *Prohibitions.* A person shall not:

- (1) Cause to be discharged into any storm drain system any pollutant, hazardous material or waste material;
- (2) Cause to be discharged into any storm drain system any pesticide, fungicide, or herbicide prohibited by the U.S. EPA;
- (3) Cause to be discharged into any storm drain system any refuse, rubbish, food waste, garbage, or any other discarded or abandoned objects;
- (4) Cause any refuse, rubbish, food waste, garbage, or any other discarded or abandoned object to be littered, thrown, deposited, placed, accumulated, maintained or kept in or upon any street, alley, sidewalk, storm drain, inlet, catch basin, conduit, drainage structure, or place of business, or upon any other public or private property, except when such materials are placed in containers, bags, recycling bins, or other lawfully established waste disposal facilities protected from stormwater and runoff;
- (5) Cause the accumulation of pollutants, leaves, dirt, or other landscape debris into any street, alley, catch basin, culvert, curb, gutter, inlet, ditch, natural watercourse, flood control channel, canal, storm drain, or any fabricated or natural conveyance; or
- (6) Cause the disposal of sanitary or septic waste or sewage into a stormwater management system or the City's storm drain system from any property or residence or any type of recreational vehicle, camper, bus, boat, holding tank, portable toilet, vacuum truck or other mobile source of waste holding tank, container or device.

(b) *Criminal Penalty.* Any person who willfully violates any provision of this § 28-21 is guilty of a misdemeanor and, upon conviction thereof, is subject to a fine of not more than five thousand dollars (\$5,000.00) or imprisonment not exceeding one year or both for each violation, with costs imposed in the discretion of the court. Each day a violation continues is a separate offense.

(Ord. No. G-10-11, § I, 7-15-10; Ord. No. G-13-21, § I, 9-5-13)

### BMP 3.3 – Gaining Access to Private Property

- **Requirement:** Establish legal means for gaining access to private property to investigate

and eliminate illicit storm drain system discharges.

- **Action Plan:** The Town adopted the County's MDE approved Stormwater Management Ordinance through Town Ordinance No. 01-18. Section 28-21 of the Stormwater Management Ordinance establishes legal means for gaining access to private property to investigate and eliminate illicit storm drain system discharges. Please see Section 28-21 attached below:

8/16/2018

Frederick, MD Code of Ordinances

Sec. 28-21. - Enforcement and Penalties.

(a) *Enforcement.*

- (1) The Director may enter and inspect any property in order to verify that the property complies with the provisions of this article. This subsection does not apply to violations of § 28-20 of this article.
- (2) If the Director determines that a property is in violation of any provision of this article, the Director shall issue a written notice of violation to all record owners of the property in accordance with Section 2-27.5 of this Code.
- (3) The Director may immediately suspend or revoke the grading or building permit and issue a stop work order on the project if the violation is of such a nature that continuing work will worsen the situation or cause a more severe violation. Violations of this nature include, but are not limited to, the following:
  - (A) Any violation of the conditions of the stormwater management plan approval;
  - (B) Changes in site runoff characteristics upon which a waiver was granted;
  - (C) Grading or construction of stormwater management facilities not in accordance with approved plans;
  - (D) Noncompliance with any correction notice or stop work order issued for the construction of a stormwater management facility; or
  - (E) Violations that, in the opinion of the City Engineer, create an immediate danger in a downstream area.

### **BMP 3.4 – Standard Operating Procedures (SOP)**

- **Requirement:** Develop and implement written SOP.
- **Action Plan:** The Town is currently gathering quotes from engineering firms to create SOP. The Town will submit the SOP with the 2019 report.

### **BMP 3.5 – Submittal of SOP to MDE**

- **Requirement:** Submit SOPs to MDE for review and approval.
- **Action Plan:** This will be done in 2019.

### **BMP 3.6 – Documentation of Illicit Discharge Screening Efforts**

- **Requirement:** Document results of illicit discharge screening efforts and include any necessary follow-up investigations, enforcement, and remediation measures implemented to address any suspected discharge.
- **Action Plan:** The Town is currently looking for outside agencies to conduct this work.

### **BMP 3.7 – Records of the IDD&E Plan**

- **Requirement:** Maintain complete records of and IDD&E program investigations and make available to MDE during field reviews of the jurisdiction's MS4 program.
- **Action Plan:** The Town is currently looking for outside agencies to conduct this work.





**Town of Emmitsburg**

**Minimum Control Measure #4**

**Construction Site Stormwater Runoff Control Plan**

Latest Revision: 10/30/2018

## **Minimum Control Measure (MCM) #4 Construction Site Stormwater Runoff Control Plan**

### **Introduction**

As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Construction Site Stormwater Runoff Control Plan is to comply with Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01. The statute and COMAR specify the requirements for any construction activity that disturbs 5,000 square feet or 100 cubic yards or more of earth movement.

### **BMP 4.1 – Adoption of a MDE Approved Ordinance**

- **Requirement:** Adopt an MDE approved ordinance that includes a process for plan review and approval of proposed construction drawings and erosion and sediment control plans, and inspection and enforcement procedures in accordance with COMAR 26.17.01
- **Action Plan:** The Town of Emmitsburg relies on Frederick County for the implementation of an erosion and sediment control program. The Town adopted Frederick County's MDE approved Grading and Sediment Control Ordinance and authorized the County to administer and enforce its requirements within the Town's jurisdiction in 1977 (see attachment – Ordinance 77-1). The County accepted this responsibility (see attachment - Resolution No 85-20). The Frederick County's Soil Conservation District reviews and approves sediment control plans. It then enforces the sediment control as shown on the approved plan.

### **BMP 4.2 – Acceptance of a County Program**

- **Requirement:** A municipality may accept the program that is being implemented by its respective county. Each permittee that relies on its respective county for the implementation of an erosion and sediment control program shall execute a binding agreement or resolution with said county. This agreement shall clarify respective roles of all parties related to plan review and approval, construction site inspections, and enforcement.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County for the implementation of an erosion and sediment control program. Please see attached Ordinance 77-1 & Resolution 85-20.

Ordinance Series: 1977

Ordinance No.: 1

AN ORDINANCE ADOPTING THE GRADING AND SEDIMENT CONTROL  
ORDINANCE OF FREDERICK COUNTY FOR THE TOWN OF EMMITSBURG,  
MARYLAND

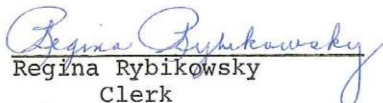
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FIRST: WHEREAS, the Burgess and Commissioners of the Town of Emmitsburg have reviewed and considered the Grading and Sediment Control Ordinance of Frederick County, Maryland effective June y, 1977.

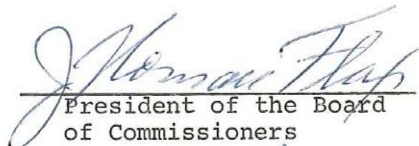
NOW THEREFORE, it is resolved by the Burgess and the Board of Commissioners of the Town of Emmitsburg, Maryland, that the Grading and Sediment Control Ordinance of Frederick County, Maryland is hereby adopted in full force and effect in the incorporated Town of Emmitsburg and Frederick County is hereby granted authority within the Town of Emmitsburg and may fully enforce all said legal provisions.

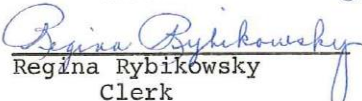
SECOND: It is further enacted and ordered that the ordinance shall be signed, executed, published and posted in accordance with Article II of the Code of Emmitsburg, and that this ordinance shall become effective as soon as such requirements are met.

ATTEST:

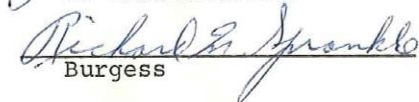
  
Regina Rybikowsky  
Clerk

8-2-77  
Date

  
President of the Board  
of Commissioners

  
Regina Rybikowsky  
Clerk

8-2-77  
Date

  
Burgess



(APPROVED)

Yes

(VETOED)

I hereby certify that the foregoing ordinance has been published and posted in accordance with the requirements of Article II of the Code of Emmitsburg, making the effective date of this ordinance Aug. 14, 1977.

Regina Rybikowsky  
Regina Rybikowsky  
Clerk

THE EFFECTIVE DATE OF THIS RESOLUTION IS JUNE 4, 1985.

RESOLUTION NO. 85-20

Re: Sediment Control - Municipalities Adoption  
of County Ordinance and Administration of  
same by Frederick County

WHEREAS, Sections 8-1101 et seq. Natural Resources Article of the Maryland Code provides for the delegation of the approval of grading and sediment control plans by municipalities to counties, and

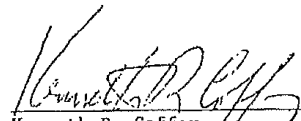
WHEREAS, the municipalities of Woodsboro, Walkersville, Thurmont, Rosemont, Myersville, Brunswick and Emmitsburg have adopted Frederick County's Grading and Sediment Control Ordinance and have authorized the Board of County Commissioners by its Division of Public Works to administer the requirements and issue Grading and Sediment Control permits in the respective jurisdictions.

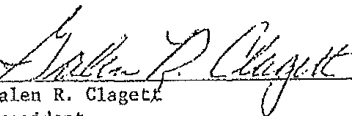
NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF FREDERICK COUNTY, MARYLAND, that the Board approves and accepts the Resolutions of Woodsboro, Walkersville, Thurmont, Rosemont, Myersville, Brunswick and Emmitsburg providing for the enforcement and administration of Grading and Sediment Control requirements by the Frederick County Division of Public Works in accordance with the provisions of the Maryland Code Article titled Natural Resources.

This Resolution was approved and adopted by the Board of County Commissioners on the 4<sup>th</sup> day of June, 1985.

ATTEST:

BOARD OF COUNTY COMMISSIONERS  
OF FREDERICK COUNTY, MARYLAND

  
Kenneth R. Coffey  
Administrative Assistant

By:   
Galen R. Clagett  
President

#### **BMP 4.3 – Compliance with 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control**

- **Requirement:** Ensure compliance with requirements under 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to ensure compliance with the requirements under 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

#### **BMP 4.4 – Necessary Permits Obtained**

- **Requirement:** Ensure all necessary permits have been obtained, including MDE's General Permit for Stormwater Associated with Construction Activity for projects disturbing one acre or more, and local sediment and erosion control plan approval.
- **Action Plan:** All permits are forwarded to the Office of Sustainability & Environmental Resources at Frederick County.

#### **BMP 4.5 – Receiving, Investigating, and Resolving Complaints**

- **Requirement:** Develop a process for receiving, investigating, and resolving complaints from any interested party related to construction activities within the jurisdiction.
- **Action Plan:** The Town Planner forwards all complaints to the Office of Sustainability & Environmental Resources at Frederick County.

#### **BMP 4.6 – Tracking Construction Sites**

- **Requirement:** Track all active construction sites within the jurisdiction and report to MDE the disturbed areas for all active permits in accordance with reporting requirements.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to track all active construction sites within the jurisdiction.

#### **BMP 4.7 – Construction Site Inspections and Enforcement in Accordance with COMAR**

- **Requirement:** Ensure that construction site inspections and enforcement procedures are performed in accordance with COMAR.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to conduct construction site inspections and enforcement.

#### **BMP 4.8 – Prevention and Reduction of Erosion and Sediment Pollution**

- **Requirement:** Use all procedures within existing municipal codes to help prevent and





reduce erosion and sediment pollution into waters of the State from any construction activity.

- **Action Plan:** The Town of Emmitsburg relies on Frederick County for the implementation of an erosion and sediment control program.



#### BMP 4.9 – Responsible Personnel Certification



- **Requirement:** Ensure staff is adequately trained on proper procedures and actions to address potential discharge of pollutants into the storm drain system as a result of any construction activity.
- **Action Plan:** Six Town employees are adequately trained on proper procedures and actions to address potential discharge of pollutants into the storm drain system as a result of any construction activity. The following employees are Certified Responsible Personnel:



- Amy Naill, Code & Parking Enforcement Officer
- Cathy Willets, Town Manager
- Zachary Gulden, Town Planner
- Christopher Wantz, Public Works
- David Wantz, Public Works
- James Click, Public Works



State of Maryland	
Erosion & Sediment Control Certification	
Be it known that	
James CLICK	9/25/2018
Name	Date Issued
has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.	
	No. RPC014247 

State of Maryland	
Erosion & Sediment Control Certification	
Be it known that	
David WANTZ	9/27/2018
Name	Date Issued
has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.	
	No. RPC014282 

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 

State of Maryland	
Erosion & Sediment Control Certification	
Be it known that	
Zachary Gulden	8/6/2018
Name	Date Issued
has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.	
	No. RPC013848 

State of Maryland	
Erosion & Sediment Control Certification	
Be it known that	
CHRISTOPHER WANTZ	9/27/2018
Name	Date Issued
has met the requirements for certification of responsible personnel in erosion and sediment control pursuant to Environment Article §4-104.	
	No. RPC014281 



**Town of Emmitsburg**

**Minimum Control Measure #5**

**Post Construction Stormwater Management Plan**

Latest Revision: 10/30/2018



## **Minimum Control Measure (MCM) #5 Post Construction Stormwater Management Plan**

### **Introduction**

As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Post Construction Management Plan is to maintain an acceptable stormwater management program in accordance with Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland and State stormwater management regulations under COMAR 26.17.02. The Statute of and COMAR require that stormwater management shall be addressed for new development and redevelopment for any proposed project that disturbs 5,000 square feet or more.

### **BMP 5.1 – Adoption of an MDE Approved Ordinance**

- **Requirement:** Adopt an MDE approved stormwater management ordinance that provides plan review and approval processes, and inspection and enforcement procedures that ensure proper construction and maintenance of BMPs in accordance with COMAR 26.17.02.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County for the implementation of the stormwater management program. The Town adopted the County's MDE approved Stormwater Management Ordinance and authorized the County to administer and enforce its requirements (see attachments – Ordinance No. 01-18). The County accepted this responsibility (see attachment – Resolution 02-29). The County reviews, approves, and inspects stormwater management facilities. This includes the required triennial SWM facility maintenance inspections after the facility is in operation.

### **BMP 5.2 – Acceptance of a County Program**

- **Requirement:** A municipality may accept an MDE approved stormwater program that is being implemented by its respective county. Each permittee relying on the county for the implementation of a stormwater management program shall execute a binding agreement or resolution with said county. The agreement shall clarify respective roles of all parties related to stormwater plan review and approval, construction and post construction inspections, routine maintenance, enforcement, and BMP tracking.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County for the implementation of a post construction stormwater management program. Please see attached Ordinance 01-18 & Resolution 02-29.

AN ORDINANCE TO AMEND  
TITLE 15  
OF THE CODE OF EMMITSBURG  
ENTITLED  
BUILDING AND CONSTRUCTION

\*\*\*\*\*  
BE IT RESOLVED, ENACTED AND ORDAINED, this 10<sup>th</sup> day of September  
2001, by the Mayor and Board of Commissioners of the Town of Emmitsburg, Maryland,  
pursuant to the authority granted to them by the laws of Maryland and the Charter of the Town  
of Emmitsburg, that Title 15 Emmitsburg Municipal Code be amended by adding thereto Chapter  
15.21

The amended section of this regulation read as follows with new wording indicated in  
BOLD CAPITAL letters and deleted words in {brackets}

WHEREAS, ON JUNE 5, 2001 FREDERICK COUNTY, MARYLAND ADOPTED  
A STORMWATER MANAGEMENT ORDINANCE DESIGNATED AS ORDINANCE  
01-10-284 AND CODIFIED IN THE FREDERICK COUNTY CODE, CHAPTER 1-15.2  
PURSUANT TO THE ENVIRONMENT ARTICLE, TITLE 4, SUBTITLE 2,  
ANNOTATED CODE OF MARYLAND (FORMERLY, THE NATURAL RESOURCES  
ARTICLE, TITLE 8, SUBTITLE IIA), AND

WHEREAS, THE TOWN OF EMMITSBURG HAS REVIEWED THE  
COUNTY'S ORDINANCE AND BELIEVES IT IS SATISFACTORY TO PROTECT THE  
LIVES AND PROPERTY OF EMMITSBURG RESIDENTS AND CITIZENS, AND

WHEREAS, FREDERICK COUNTY HAS STATED ITS WILLINGNESS TO  
ADMINISTER AND ENFORCE STORMWATER MANAGEMENT LAWS WITHIN  
THE CORPORATE LIMITS OF THE TOWN OF EMMITSBURG.

NOW, THEREFORE, BE IT RESOLVED, ENACTED AND ORDAINED BY  
THE MAYOR AND BOARD OF COMMISSIONERS OF THE TOWN OF  
EMMITSBURG, MARYLAND THAT THE EMMITSBURG MUNICIPAL CODE IS

ORDINANCE SERIES 2001  
ORDINANCE NO. 01-18

PAGE 3 OF 3

BE IT FURTHER RESOLVED, ENACTED AND ORDAINED, that this Ordinance shall take effect on the 11<sup>th</sup> day of September 2001 and the Town Clerk shall post a copy

thereof at the Town Office and one other public place within the Town, as designated by the Mayor on the 11<sup>th</sup> day of September, 2001.

PASSED this 10<sup>th</sup> day of September, 2001.

ATTEST:

Donna Thompson  
Donna Thompson, Town Clerk

Patrick Boyle  
Patrick Boyle  
President of the Board of Commissioners

APPROVED this 10<sup>th</sup> day of September, 2001.

William H. Carr  
William H. Carr, Mayor

VETOED this \_\_\_\_\_ day of \_\_\_\_\_, 2001.

\_\_\_\_\_  
William H. Carr, Mayor

I hereby certify that the foregoing Ordinance has been posted as required by Chapter 2.04 of the Emmitsburg Municipal Code, and as directed by the provisions of this Ordinance.

Date: 24 Sept 01

Donna Thompson  
Donna Thompson, Town Clerk



THE EFFECTIVE DATE OF THIS RESOLUTION IS November 21, 2012

RESOLUTION NO. 02-29

RESOLUTION OF  
THE BOARD OF COUNTY COMMISSIONERS  
OF FREDERICK COUNTY, MARYLAND

Re: Providing Stormwater Management Services to Municipalities

RECITALS

On June 5, 2001, Frederick County adopted a Stormwater Management Ordinance (Ordinance No. 01-10-284) governing stormwater management in the County pursuant to the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland (formerly, the Natural Resources Article, title 8, Subtitle 11A); and

The City of Brunswick, Town of Emmitsburg, Town of Middletown, Town of Myersville, Town of Myersville, Town of New Market, Village of Rosemont, Town of Thurmont, and the Town of Walkersville have reviewed the County's Ordinance and have determined it is satisfactory to protect the lives and property of their residents; and

The municipalities listed above have adopted the County's Ordinance and any regulations adopted pursuant thereto; and

Frederick County is willing to administer and enforce the stormwater ordinance within the corporate limits of the municipalities listed above.

RESOLUTION

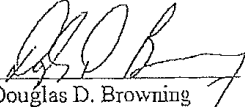
NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF FREDERICK COUNTY, MARYLAND, that the County shall

pc: CAO, HODAK, SMITH, GROSSNICKLE, FILE

administer and enforce the provisions of its stormwater ordinance, Chapter 1-15.2 of the Frederick County Code and regulations promulgated thereunder, within the corporate limits of the City of Brunswick, Town of Emmitsburg, Town of Middletown, Town of New Market, Village of Rosemont, Town of Thurmont, and the Town of Walkersville under the terms and conditions as may be agreed to between the County and each municipality.

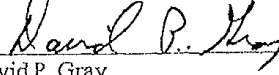
The undersigned hereby certifies that this Resolution was approved and adopted on the 21<sup>st</sup> day of November, 2002.

ATTEST:

  
Douglas D. Browning  
Acting County Manager

WK 11/21/02

BOARD OF COUNTY COMMISSIONERS  
OF FREDERICK COUNTY, MARYLAND

BY:  (SEAL)  
David P. Gray  
President

### **BMP 5.3 – Implementation of the Maryland Stormwater Design Manual**

- **Requirement:** Implement the principles, methods, and practices found in the latest version of the 2000 Maryland Stormwater Design Manual, Volumes I & II (Manual). This requires that environmental site design (ESD) be implemented to the maximum extent practicable (MEP) for all new and redevelopment projects.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to ensure compliance with the requirements under the 2000 Maryland Stormwater Design Manual, Volumes I & II (Manual).

### **BMP 5.4 – MS4 Progress Report**

- **Requirement:** Maintain stormwater program implementation information and provide updates in accordance with the MS4 Progress Report.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to fulfill this requirement.

### **BMP 5.5 – Staff Training**

- **Requirement:** Provide training for staff on proper BMP design, performance, inspection, and routine maintenance. Report to MDE the number of trainings offered, topics covered, and number of attendees.
- **Action Plan:** The Town of Emmitsburg relies on Frederick County to fulfill this requirement; however, the Town Planner, Mr. Zachary Gulden, attended an all-day Stormwater BMP Inspection and Maintenance Workshop on 10/17/2018 at the Anne Arundel Watershed Stewards Academy.



# Stormwater BMP Inspection & Maintenance Workshop

Anne Arundel County will be hosting a Stormwater BMP Inspection & Maintenance Workshop on October 17, 2018 at Bureau of Utilities Operations, 443 Maxwell Frye Road, Millersville, MD 21108

## Background:

Stormwater BMPs must have annual, and sometimes more frequent, inspection and maintenance to perform as intended. Maintenance includes hydrologic and water quality function, landscape functions, and consideration of impacts on human health and safety.

## The workshop will help:

- Understand stormwater, how it affects water quality, and regulations associated with it;
- Understand stormwater management devices used in Maryland and how they function; and
- Understand inspection and maintenance requirements of each stormwater practice.

## Below is a brief bio of the instructors:

William F. Hunt, III, Ph.D., P.E.



Dr. Hunt is a Professor and Extension Specialist in North Carolina State University's Department of Biological and Agricultural Engineering. Dr. Hunt holds degrees in Civil Engineering (NCSU, B.S.), Economics (NCSU, B.S.), Biological and Agricultural Engineering (NCSU, M.S.) and Agricultural and Biological Engineering, (Penn State, Ph.D.). He is a registered PE in North Carolina.

Since 2000, Hunt has assisted with the design, installation, and/or monitoring of over 90 stormwater best management practices (BMPs), including bioretention, stormwater wetlands, innovative wet ponds, green roofs, permeable pavement, water harvesting/cistern systems and level spreaders. He teaches 20-25 short courses and workshops each year on stormwater BMP design, function, and maintenance throughout North Carolina and the US.

## Bill Lord



Bill Lord is an Area Environmental Agent with the N.C. Cooperative Extension Service. Mr. Lord has received a BS degree in Horticulture and an MS degree in Entomology from NC State University. A 23-year veteran of North Carolina Cooperative Extension, Mr. Lord has experience in stormwater runoff, nutrient and pesticide management, and plant growth. He has supervised the construction and maintenance of several stormwater practices including stormwater wetlands, wet ponds, and bioretention areas. He also pioneered research on mosquito populations in stormwater

facilities across North Carolina. Mr. Lord is a member of NC Cooperative Extension's Watershed Education Network and the Neuse Education Team. Annually, he conducts 12 to 15 workshops on stormwater management practice construction and maintenance throughout North Carolina and the US.

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## Registration:

Registration fee is \$140 and includes breakfast, break service, and lunch.

<https://app.etapestry.com/cart/WatershedsStewardsAcademy/default/category.php?ref=2219.0.54911041>



**Town of Emmitsburg**

**Minimum Control Measure #6**

**Pollution Prevention and Good Housekeeping Plan**

Latest Revision: 10/30/2018

## **Minimum Control Measure (MCM) #6 Pollution Prevention and Good Housekeeping Plan**

### **Introduction**

As part of the Town of Emmitsburg's Stormwater Management Program, the purpose of the Pollution Prevention and Good Housekeeping Plan is to develop and implement an operation and maintenance program that includes a training component to prevent and reduce pollutant runoff from municipal operations in accordance with CFR 40 122.34(b)(6).

### **BMP 6.1 – Staff Training**

- **Requirement:** Ensure that appropriate staff and contractors receive training at least annually on all sections of the permit relevant to this MCM. The training shall be designed to address the importance of water quality protection through pollution prevention and good housekeeping measures. Topics shall include spill prevention and response, controls for reducing or eliminating the discharge of pollutants during facility operations, proper disposal of waste, and routine inspections to detect and correct potential stormwater discharges at facilities owned and operated by the jurisdiction.
- **Action Plan:** The Town held a mandatory training session for all employees on September 11, 2018. Employees watched two videos, which included the following Pollution Prevention & Good Housekeeping topics: introduction to stormwater management, how to spot and report stormwater pollution; salt storage and application practices; material stockpile practices; chemical handling practices; general chemical management; general waste management; fueling operations; spill prevention and clean-up; vehicle maintenance; and general management practices. The training sign-in sheet and video links are provided below.
  1. <https://www.youtube.com/watch?v=hnXMaImmcKo&t=83s>
  2. <https://www.wesslerengineering.com/pollution-prevention-and-good-housekeeping-part-i>





## Sign-In Sheet

### Town of Emmitsburg Annual Employee Stormwater Training

September 11, 2018

Name - Print	Signature	Department
Zach Gidden	Zach Gidden	Planning/zoning
Amey Nail	Amey Nail	Planning/zoning/parking
Steve Fissel	Steve Fissel	Building Maintenance
Cathy Willes	Cathy Willes	Town Manager
Reese Fryer	Reese Fryer	Accounting
Colt Tashler	Colt Tashler	Accounting
Jacob Fisher	Jacob Fisher	Water & sewer operator
Kenneth Wayne Shawer	Kenneth Wayne Shawer	water & wastewater operator
Dan Fissel	Dan Fissel	water/waste water Supt.
Darrell Lambright	Darrell Lambright	Park / recreation
Chris Wantz	Christopher A. Wantz	Streets / Parks
David Wantz III	David Wantz III	Streets / Parks
Jim Chick	Jim Chick	DPW
Maddy Shaw	Maddy Shaw	Executive

[illegible]



Training Event held on 09/11/18

## **BMP 6.2 – Pollution Prevention Plan at Town Owned Properties**

- **Requirement:** Develop, implement, and maintain a pollution prevention plan at publicly owned or operated properties that includes:
  - a) A description of site activities;
  - b) A site map identifying all building; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow, water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
  - c) A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
  - d) Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
  - e) Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
  - f) Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.



- **Action Plan:** Please see the attached Pollution Prevention Plan and Town owned properties:



**Town of Emmitsburg**  
**Pollution Prevention Plan**

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## **Introduction and Purpose**

Polluted stormwater runoff has been identified by the United States Environmental Protection Agency (EPA) as one of the main causes of the nation's water quality problems. To help alleviate the situation, the EPA requires communities with Municipal Separate Storm Sewer Systems (MS4) to obtain a general permit under the National Pollutant Discharge Elimination System (NPDES) program authorizing their stormwater discharges.

Under the NPDES permit for its MS4, the Town of Emmitsburg is required to establish a regular inspection and maintenance program for all of its Town owned stormwater management facilities. All components of the stormwater collection system owned by the Town are included in this program. The components of the Town owned stormwater system include municipal roads, parking lots, or other paved areas; storm drain inlets, storm sewer piping and outfalls, swales, ditches, or other stormwater conveyances, detention/retention basins and other stormwater management structures.

The goal of this Pollution and Prevention Plan is to ensure that all of the Town of Emmitsburg's stormwater management facilities are functioning properly and to prevent or reduce pollutant runoff to the maximum extent practical. The Town of Emmitsburg personnel are required to follow this Pollution and Prevention Plan when operating, maintaining, or repairing any aspect of the Town's stormwater system. If outside contractors conduct work on any part of the Town's stormwater system, they will also be required to follow the procedures outlined in this manual.

## **Pollution Prevention/Good Housekeeping Procedures for Municipal Operations**

Pollution prevention and good housekeeping are the simplest and least costly methods to implement to help protect stormwater quality from municipal facilities. These are integral components to an effective stormwater management policy because it is easier to prevent pollution from entering waterways than to clean it up later.

The Town uses the following Town owned facilities for municipal operations: 22 East Main Street, 140 South Seton Avenue, and 303 West Lincoln Ave. The Town pool is located at 201 West Lincoln Avenue.

### **Good Housekeeping**

Good housekeeping practices are designed to maintain a clean and orderly work environment. Often the most effective first step towards preventing pollution in the stormwater collection system simply involves using good common sense to improve basic housekeeping methods. A clean and orderly work area reduces the possibility of accidental spills caused by mishandling of chemicals or equipment, and should reduce safety hazards to Town personnel.

- Maintain clean, dry floors and ground surfaces by using brooms, shovels, vacuum cleaners and cleaning machines.



- Sweeping shall be conducted once a week to get rid of dirt and other debris, as well as immediately following loading/unloading activities, when practical.
- Regularly pickup garbage and waste materials and place all trash, dirt, and other debris in the dumpster.

## **Material Storage Practices**

Improper storage can result in the release of materials or chemicals that can cause stormwater runoff pollution. Keep storage areas clean and well organized and provide adequate aisle space to facilitate material transfer and easy access for inspections.

- All containers, drums, and bags shall be stored away from direct traffic routes to prevent accidental spills.
- When practical, chemicals, fluids, and supplies should be kept indoors.
- If containers containing chemicals are stored outside, they must be covered when not being used, and placed on spill platforms.
- All containers shall be kept in good condition, tightly closed when not in use, properly labeled and marked, and labels must remain clean and visible. Label all containers with contents and proper handling instructions.
- Perform regular inspections of all indoor and outdoor storage locations. Inspect outdoor storage areas after a defined rain event.
- Store bagged and boxed materials on pallets.
- Remove and properly dispose of expired materials.
- Do not place storage areas over or immediately adjacent to drains or waterways.
- Storage areas should be located on highly impervious surfaces such as concrete.
- Do not store incompatible materials with each other.
- Assure storage facility is constructed of proper materials and meets applicable fire and building codes.
- Equip storage areas with the appropriate spill clean-up materials.

## **Material Handling Practices**

Absorbent material, spill kits and drip pans must be kept near any potential spill hazard and protected from rainfall. All 55 gallon drums are to be placed in a spill container. If spills or accidents occur, contain with dikes, berms, or appropriate absorbent materials and disposed of properly after use. Spills of hazardous materials require special care and should only be attempted by trained Town or contracted personnel. Notify the acting supervisor and emergency responders immediately if potentially harmful conditions exist. Collect all waste fluids in accurately labeled containers and dispose of properly.

## **Stormwater Facility Operation, Inspection, and Maintenance**

### **Stormwater Facility Operation**

All municipally owned stormwater facilities will be operated according to their design specifications and in a manner that prevents or reduces adverse environmental or public health and safety impacts.

### **Stormwater Facility Inspection**

Regular inspections are to be conducted by the Town of Emmitsburg Public Works personnel to evaluate the performance of the stormwater facilities and to determine the potential or actual amounts of pollutants, trash, and debris entering and discharging from the stormwater collection system. These inspections should occur as part of regular job duties.

- Inspections will check for excessive silt build-up, erosion, cracked or collapsed pipes, misaligned joints, and water quality concerns such as unusual algae growth, discolored water, water with a sheen, and suspect odors.
- Inspection frequencies will depend on a variety of factors including weather conditions, type, and functions of stormwater structures.
- All inspection activities, results, and recommendations are to be documented in writing and kept on file with the Town. Typical records to be retained for reference include a log of all inspections, repairs, and maintenance performed at the site, copies of inspection reports, invoices for work performed, and photographs of facilities if practical.

### **Roadways**

The Town of Emmitsburg owns and maintains approximately 12 miles of roadways.

- The overall condition and cleanliness of Town roads and parking lots shall constantly be inspected and evaluated during routine travels by Public Works' personnel.
- Those with excessive staining, trash, or sediment will be investigated and scheduled for cleaning or repairs as necessary.
- Appropriate corrective actions shall be considered for any areas exhibiting flooding or poor drainage patterns.

### **Storm Drain Inlets**

The Town of Emmitsburg owns and maintains storm drain inlets located along Town owned roadways and parking lots throughout the Town.

- All of the Town's storm drain inlets are to be inspected on a regular basis to determine the trash and sediment load and overall condition of the structure. If the depth of deposits is greater than or equal to one-third the depth from the basin bottom to the invert of the lowest pipe or opening into or out of the basin, cleaning will be scheduled.
- Storm drain inlets that accumulate trash and deposits quickly will be inspected more frequently and the drainage area will also be inspected to determine possible causes.

- Inlet grates will be inspected to ensure that there is no trash blocking the inlets, especially before heavy rains are forecast.
- While inspecting storm drain inlets, Town staff will check for evidence of illegal dumping or illicit discharges. If evidence of illegal dumping or illicit discharges is found, efforts are to be made to identify the source of these discharges.

### **Storm Sewer Piping, Drainage Channels, and Outfalls**

The Town owns underground storm sewer piping in a broad range of sizes.

- Large size piping is to be visually inspected on a regular basis to check for structural integrity, blockages, or any other unusual conditions such as improper cross-connections or excessive inflow/infiltration.
- Smaller size piping is to be inspected periodically or as needed with a TV camera.
- The Town also owns various storm culverts throughout the Town, which the Public Works personnel are to inspect for blockages, especially after rain events.

The Town maintains ditches and swales that function as storm drainage channels, and these are routinely checked for trash, debris, sediment build-up, obstructions, and general water quality.

- Storm drainage channels are to be inspected at least annually to check for obstructions or any other conditions that might impede the flow of stormwater.

### **Stormwater Basins**

The Town owns and maintains stormwater basins located on Creamery Road and the Northgate residential development. These basins are to be inspected on a regular basis to check for sediment accumulation and overall basin conditions, and they should be inspected after large rain events to evaluate overall performance and drainage characteristics.

- Sediment exceeding 10% of the designed basin depth will trigger sediment removal to the original basin shape and depth.
- The basin will be inspected for the presence of trash, yard waste or other non-degradable materials.
- The type and quantity of vegetation will be checked.
- Basin dikes, berms, outlet structures, and spillways will be examined for structural integrity.
- The basins will be checked to determine if the trash racks are missing or plugged.
- The basins are to be checked for evidence of water pollution such as oil sheen, discolored water, and unusual odors.

### **Stormwater Facility Maintenance**

The Town of Emmitsburg's stormwater Pollution Prevention Plan is structured to provide inspections of all facilities to provide maintenance as needed. Although the operable life of stormwater facilities is generally expected to be several decades or more, lack of maintenance resulting in overgrown vegetation, accumulated sediment and debris, and deteriorated structures



can greatly reduce their effectiveness. Without regular operation and maintenance programs, these facilities may not store or convey stormwater according to their design, and may require frequent repair or even replacement. Regular maintenance allows facilities to operate as designed for their maximum lifetime, enabling optimum flood control and water quality treatment as well as demonstrating to the public that stormwater capital investments are being protected in a systematic, responsible, and cost-effective manner.

- All maintenance activities are to be documented in writing and kept on file with the Town.

## **Roadways**

The Town of Emmitsburg Public Works Department is responsible for repairs and maintenance of approximately 12 miles of Town roadways. In the winter months, the Public Works Department removes snow and ice from all of the Town roadways. Roadway maintenance activity that can affect stormwater quality include roadway paving repair, traffic line painting, snow removal, and de-icing, and street sweeping. If road paving or line painting is needed the work will generally be performed by outside contractors. If road repairs are needed, the work will generally be performed by the Public Works Department.

## **Roadway Paving Repair**

The following guidelines should be followed when conducting roadway paving repairs within the Town of Emmitsburg:

- Avoid paving activities during wet weather.
- Ensure that storm drain inlets and open manholes are protected during road repair work to prevent slurry mixes, dust, and debris from entering the storm sewers.
- Avoid using water to clean up. Mechanically sweep and/or vacuum dust and debris following all activities. DO NOT wash residue into the storm drain system.
- Place stockpiles away from waterways and stormwater inlets to prevent materials from being washed into streams. Cover stockpiles or contain with berms.
- Contain water and wastes generated during cleaning and flushing of spray equipment and field servicing of equipment. Use booms and inlet protection, and vacuum or allow area to dry before uncovering storm drain inlets.
- Recycle used materials such as asphalt whenever possible. Store these materials properly.
- Use drip pans to contain leaks from vehicles and equipment parked at the site overnight.

## **Traffic Line Painting**

The following guidelines should be followed when conducting traffic line painting activities within the Town of Emmitsburg:

- Develop paint-handling procedures for proper use, storage, and disposal of paints to keep materials contained.

- Protect storm drain inlets, open manholes and roadside ditches during grinding and pressure washing activities.
- Avoid using water to clean-up. Mechanically sweep and/or vacuum dust and debris following all activities. DO NOT wash residue into the storm drain system.
- Contain water and wastes generated during cleaning and flushing of spray equipment and field servicing of equipment. Use booms and inlet protection, and vacuum or allow area to dry before uncovering storm drain inlets.

### **Snow Removal and De-Icing**

The storage and application of materials used for roadway de-icing or traction control shall be conducted in a manner that reduces the impact to the stormwater sewer system and the environment. Types of materials currently being used in the Town of Emmitsburg include rock salt for de-icing. All road salt is stored indoors in two salt sheds located at the Town's sewer plant. All salt storage is to be protected from precipitation.

- During loading and unloading of road salt, prevent and/or minimize spills by utilizing safe work practices and sound judgement.
- If any material is spilled, promptly collect it using dry cleaning methods only to prevent polluted runoff.
- At minimum, clean-up around the salt storage area should happen at least once a day.
- All collected material shall be either reused or properly disposed of in accordance with federal and state regulations.
- Minimize the tracking of materials from the storage area and the distance that road salt is transported during loading/unloading operations.
- All operators of snow plow/salt spreaders are to be trained in the proper application rates of road salt.
  - The salt spreaders are to be examined before operating to ensure that they are functioning properly.
  - The application of road salt to roads or parking lots will be only enough to accomplish the task and will take into consideration site specific characteristics such as road width and design, traffic concentration, and proximity to surface waters.
  - Road salt application should occur until snow has started to fall, to help ensure that the dry salt is not swept off the roadways by vehicles.

### **Street Sweeping**

The streets in the Town of Emmitsburg are mechanically swept once per month. Periodically intersections or areas with built-up debris are swept by hand and debris are collected and disposed of accordingly. Any material recovered will be handled and disposed of in accordance with all applicable state and federal disposal regulations.

### **Storm Drain Inlets**

The Town of Emmitsburg personnel shall schedule cleaning municipal storm drain inlets when inspections reveal an excessive accumulation of sediment or debris. Structural repairs to any

part of storm drain inlets will be performed as needed including replacement of damaged or deficient piping.

### **Storm Sewer Piping, Drainage Channels, and Outfalls**

If inspection of storm sewer piping reveals structural deficiencies, cross-connections, or blockages from tree roots, sediment build-up or obstructions, then the appropriate maintenance solution will be selected and implemented. These solutions may include excavation and repair, tree root removal, and physical cleaning. Chemical agents will not be utilized. For cleaning techniques such as jet/vactor use, rodding or bucketing, the downstream end of the pipe will be blocked off and the debris will be captured and removed from the system. For storm culverts, maintenance of free flowing conditions will be achieved by physical removal of any blockages that are identified via inspections.

- For storm drain channels such as ditches or swales, debris, sediment and overgrown vegetation will be removed when needed.
- For storm sewer easements, the Town will remove any obstruction that is identified via inspection.
- For storm sewer outfalls, trash/obstructions will be removed to maintain free flowing conditions.
- Velocity reducers will be maintained or replaced as needed.

### **Stormwater Basins**

When deemed necessary by inspections, removal of yard waste, non-degradable waste, nuisance or exotic/invasive vegetation and sediment in detention basins will occur during dry conditions when possible. In the process of effecting repairs or performing basin cleaning, vegetation may be disturbed or removed. These areas will be immediately stabilized and revegetated. Mowing and/or trimming of vegetation will occur as needed to sustain the basin and all detritus will be removed. Areas of bare or sparse vegetation will be addressed by soil aerating, conditioning, seeding and mulching, as necessary to restore a proper vegetative cover. Vegetative basin covers will be maintained at 95% at all times. Basin outlet structures will be cleared of debris when needed to allow for unimpeded flow.

### **Disposal of Debris**

Any materials recovered from any part of the storm sewer collection system and street sweeping will be handled and disposed of in accordance with all applicable state and federal disposal regulations. All recovered materials, especially those from storm drain inlets, piping, or basins, will be evaluated to determine if it is municipal, residual, or hazardous waste.

- Most of the typical materials recovered by Town personnel will be municipal wastes that can be discarded with the Town's normal waste stream. This includes street sweepings, storm drain inlet cleanings, sewage contaminated soils, and general trash that is not obviously or knowingly contaminated. The following are guidelines for the proper disposal of materials recovered from municipal operations.



- Recovered trash and general debris will be brought back to the Town's Public Works Facility yard where it can be discarded along with the normal Town municipal waste stream.
- Examples of residual wastes include oil-contaminated materials, asbestos piping, and used tires and oils. Asphalt millings are classified as a co-product if stored and managed properly; otherwise it is residual waste. Disposal of residual wastes will be subject to the requirements of the disposal facility. Chunks of cured asphalt are classified as clean fill and can be used as clean fill, but cannot be placed in the waterways (e.g. creeks, wetlands, or floodways). If used asphalt will not be used as clean fill, it must be disposed of as residual waste.
- If medical wastes are recovered, they are classified as "special handling municipal waste." If Town personnel discover wastes that they believe to be hazardous or medical waste, they should immediately contact the Director of Public Works and inform him or her of the situation. The Director of Public Works is to contact the Fire Department and Haz-Mat team as appropriate for proper disposal of the waste.
- It ultimately will be up to the Town staff that are collecting or handling recovered materials to determine the proper waste designation and disposal methods. Any questions can be directed to the Solid Waste Program, Land, and Materials Administration through the Maryland Department of the Environment at 410-537-3315.

### **Fertilizers, Herbicides, and Pesticides**

Any planned fertilizer applications on Town lands or around any part of the storm sewer collection system will be reviewed by Town personnel in order to comply with all applicable regulations and to prevent adverse water quality impacts.

- Fertilizers, herbicides, and pesticides shall be applied exactly according to manufacture guidelines. As more is not always better in the case of chemical application. The use of these chemicals will be limited as much as possible and non-hazardous alternatives shall be encouraged.
- Applications will only be conducted by Town staff or contractors who have an applicator's license from the Maryland Department of Agriculture.

## 22 East Main Street

- a) A description of site activities;
  - This site includes Sherriff Deputy offices, and it is the main storage facility for the Public Works Department. Items stored here include:
    - Four utility pick-up trucks
    - One dump truck
    - Push and riding lawn mowers
    - Weedwackers, chainsaws, and other gasoline powered tools
    - Hand tools
    - Street lights & supplies
    - Fire hydrants & supplies
    - Street sweepers
    - Snow plows
    - Road signs & supplies
    - Road salt spreaders
    - Backhoe
    - Construction equipment
    - Saws
    - Paint & stains
    - Pesticides
    - Vehicle wash supplies
    - Gasoline, oil, & lubricants
    - Antibacterial soap
    - Credit 41 non-selective herbicide
    - Neutro-wash
    - Lubri-seal
- b) A site map identifying all building; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow, water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
  - See below Stormwater Conveyance System map for 22 East Main Street. The stormwater from this property ultimately flows to the stream called Willow Rill.





- c) A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
- Potential pollutants include:
    - Paint & stain
    - Pesticide
    - Vehicle washing supplies
    - Gasoline, oil, & lubricants
    - Antibacterial soap
    - Credit 41 non-selective herbicide
    - Neutro-wash
    - Lubri-seal
- d) Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
- Please see the attached Pollution Prevention Plan.
- e) Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
- Please see the attached Pollution Prevention Plan.
- f) Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.
- No discharges, releases, leaks, or spills were noted for this reporting period.

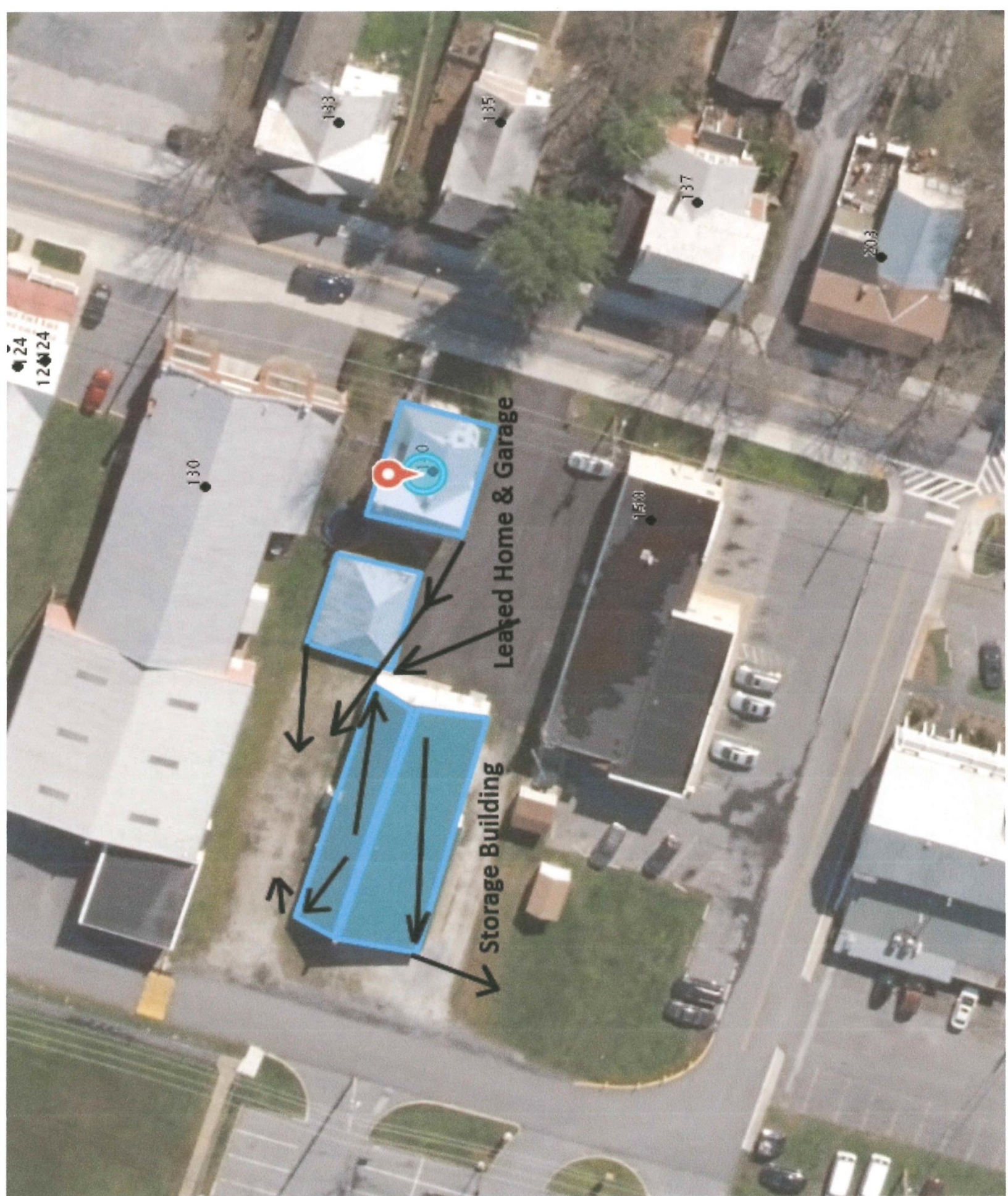
## **140 South Seton Avenue**

a) A description of site activities;

- This site includes a leased house and a garage that is used as a miscellaneous storage facility for the Public Works Department. Items stored here include:
  - Water hose
  - Metal roofing
  - Lumber
  - LED lightbulbs
  - Push mower
  - Snow thrower
  - Generator
  - Trade lift
  - Christmas decorations
  - Green Clean Pro (treatment for Rainbow Lake)
  - Liquid Asphalt
  - Pool Lift
  - Miscellaneous park equipment

b) A site map identifying all building; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow, water bodies receiving discharges; and locations of all existing structural control measures or BMPs;

- See below Stormwater Conveyance System map for 140 South Seton Avenue. The stormwater from this property ultimately flows into the gravel parking lot or grassy area and dissipates.





- c) A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
- Potential pollutants include:
    - Green Clean Pro
    - Liquid Asphalt
    - Gasoline, oil, & lubricants from the generator, trade lift, and push mower
- d) Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
- Please see the attached Pollution Prevention Plan.
- e) Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
- Please see the attached Pollution Prevention Plan.
- f) Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.
- No discharges, releases, leaks, or spills were noted for this reporting period.

### **303 West Lincoln Avenue**

- a) A description of site activities;
  - The Town leases this building to a local church.
- b) A site map identifying all building; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow, water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
  - See below Stormwater Conveyance System map for 303 West Lincoln Avenue. The stormwater from this property ultimately flows into the large grassy area and dissipates.





- c) A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
  - The only potential pollutants from this facility are common household cleaners.
- d) Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
  - Please see the attached Pollution Prevention Plan.
- e) Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
  - Please see the attached Pollution Prevention Plan.
- f) Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.
  - No discharges, releases, leaks, or spills were noted for this reporting period.

#### **201 West Lincoln Avenue**

- a) A description of site activities;
  - Community Pool
- b) A site map identifying all building; stormwater conveyances including ditches, pipes, and swales; directions of stormwater flow, water bodies receiving discharges; and locations of all existing structural control measures or BMPs;
  - See below Stormwater Conveyance System for 201 West Lincoln Avenue. The stormwater from this property ultimately flows into a stormwater drain that flows into a pipe under the road then to a ditch, which ultimately runs to the Willow Rill stream.



- c) A list of potential pollutants and their sources and locations, including run-on from adjacent properties;
  - Potential pollutants include:
    - Hot Shot Flying Insect Killer Spray
    - Wild Harvest All Purpose Cleaner
    - Essential Everyday Streak less Glass Cleaner
    - Lysol Bleach Toilet Bowl Cleaner
    - Fabuloso Multi-Purpose Cleaner
    - Clorox Cleanup
    - Muriatic Acid (Hydrochloric Acid)
    - Sodium Hypochlorite Solution
    - Odorless Charcoal Lighter
    - Sodium Bicarbonate
    - Calcium Chloride Flakes
    - Sodium Thiosulfate Pentahydrate
    - Chlorinating 1” Tablets
- d) Written good housekeeping procedures designed to reduce the potential for stormwater pollution from the facility;
  - Please see the attached Pollution Prevention Plan.
- e) Procedures for routine site inspections to detect and correct stormwater discharges, releases, and any spills or leaks on site; and
  - Please see the attached Pollution Prevention Plan.
- f) Documentation of any discharge, release, leak, or spill, including date, findings, and response actions.
  - No discharges, releases, leaks, or spills were noted for this reporting period.

### **BMP 6.3 – Report Pollution Prevention Efforts**

- **Requirement:** Quantify and report pollution prevention efforts related to the following activities;
  - a) Number of miles swept and pounds of material collected from street sweeping and inlet cleaning programs;
  - b) Describe good housekeeping methods for pesticide application such as integrated pest management plans or alternative techniques;
  - c) Describe good housekeeping methods for fertilizer application such as chemical storage, landscaping with low maintenance/native species, and application procedures;
  - d) Describe good housekeeping methods for deicing applications such as use containment; and



e) Describe other good housekeeping BMP procedures not listed above.

- **Action Plan:**

a) Number of miles swept and pounds of material collected from street sweeping and inlet cleaning programs;

<b>Street Sweeping</b>				
<b>Date</b>	<b>Location</b>	<b># of Miles Swept</b>	<b>Staff Members Involved</b>	<b>Pounds of Debris Collected</b>
01-31-18	Main Street	1	Jim, Chris, Dave, Steve	< 200 lbs
02-28-18	Main Street	1	Jim, Chris, Dave, Steve	< 200 lbs
03-29-18	Main Street	1	Chris, Dave, Steve	< 200 lbs
04-30-18	Main Street	1	Chris & Darrell	< 200 lbs
05-24-18	Main Street	1	Jim, Chris, Dave, Steve, Darrell	< 200 lbs
06-28-18	Main Street	1	Jim Chris, Dave, Steve, Darrell	<200 lbs
07-03-18	Main Street	1	Jim, Chris, Dave, Steve	< 200 lbs
08-31-18	Main Street	1	Jim, Chris, Dave, Steve, Darrell	<200 lbs
09-28-18	Main Street	1	Jim, Chris, Dave, Steve	<200 lbs
10-29-18	Main Street	1	Jim, Chris, Dave, Steve	<200 lbs

b) Describe good housekeeping methods for pesticide application such as integrated pest management plans or alternative techniques;

- Please see page 10 of the Pollution Prevention Plan.

c) Describe good housekeeping methods for fertilizer application such as chemical storage, landscaping with low maintenance/native species, and application procedures;

- Please see page 10 of the Pollution Prevention Plan.

d) Describe good housekeeping methods for deicing applications such as use containment; and

- Please see page 8 of the Pollution Prevention Plan.

e) Describe other good housekeeping BMP procedures not listed above.

- Please see the Pollution Prevention Plan.

#### **BMP 6.4 – Industrial Activity Coverage.**

- **Requirement:** Contact MDE to determine whether coverage is required for any jurisdiction owned or operated facility under the General Permit for Stormwater Discharges Associated with Industrial Activity, Sector AD.a, which provides coverage to Department of Public Works and Highway Maintenance facilities.
- **Action Plan:** This requirement ensures that all other Town-owned facilities have NPDES permit coverage, if applicable. The following Town-owned buildings and their coverage under NPDES permits can be found below.
  - Water Treatment Plant – 8585 Crystal Fountain Road. The water treatment plan is regulated under NPDES permit # 11-DP-2364 and monitored as required.
  - Waste Water Treatment Plant (WWTP) – 16707 Creamery Road. The WWTP is regulated under NPDES permit # 09-DP-0113.
  - Pump Station – 17700 Creamery Road - All materials are routed to the WWTP.



**Town of Emmitsburg, Maryland Official**

**Chesapeake Bay Restoration and Meeting Total Maximum Daily Loads Plan**

Latest Revision: 10/30/2018



# Chesapeake Bay Restoration and Meeting Total Maximum Daily Loads Plan

## Introduction

Maryland's Watershed Implementation Plan (WIP) specifies the nutrient and sediment load reductions required to address the Chesapeake Bay total maximum daily load (TMDL) by 2025. This general permit will make progress toward that strategy by requiring small MS4s, like Emmitsburg, commence restoration efforts for twenty percent of existing developed lands that have little or no stormwater management. This five-year permit term will require permittees to develop planning strategies and work toward implementing water quality improvement projects. Restoration planning strategies and implementation schedules required under this general permit are consistent with addressing the water quality goals of the Chesapeake Bay TMDL by 2025. The conditions established below require permittees to perform watershed assessments, identify water quality improvement opportunities, secure appropriate funding, and develop an implementation schedule to show the twenty percent impervious area restoration requirement that will be achieved by 2025.

- **Requirement A:** Develop a Baseline Impervious Assessment. The following information shall be submitted with this assessment:
  1. Total impervious acres for the jurisdiction covered under this general permit;
  2. Total impervious acres treated by water quality BMPs;
  3. Total impervious acres treated by BMPs providing partial water quality treatment;
  4. Total impervious acres treated by nonstructural practices (i.e., rooftop disconnections, non-rooftop disconnections, or vegetated swales);
  5. Verification that any impervious area draining into BMPs with missing inspection records are not considered treated; and
  6. Total impervious acres untreated and twenty percent of this total area (restoration requirement).
- **Action Plan:** The Town is currently gathering written quotes from engineering firms in order to complete the impervious area restoration report. This report will be finalized and submitted to MDE in 2019, which is the first year of the new General Discharge Permit No. 13-SF-5501. The expected cost is \$19,000.
- **Requirement B:** Develop and Implement an Impervious Area Restoration Work Plan.

Permittees shall submit a work plan with the first year annual report to describe the activities and milestones that will be performed over the permit term to show progress toward the twenty percent impervious area restoration requirement.
- **Action Plan:** This task will be complete in 2019.
- **Requirement C:** Develop a Restoration Activity Schedule and provide annual updates on the status of the projects in the planning, construction, and final phase of implementation.

- **Action Plan:** This task will be complete in 2019.
- **Requirement D:** Permittees are required to develop a BMP inventory consistent with the required fields outlined in the BMP Database provided in Appendix B, Table B.1. A brief narrative shall accompany the BMP database and provide verification that routine inspections and maintenance activities are up to date. The database fields for inspection and maintenance need to be completed and show that BMPs are inspected every three years and properly maintained.
- **Action Plan:** This task will be complete in 2019.