APPENDIX C

Public Education & Outreach

DRAFT WEB PAGE
VILLAGE OF COMBINED LOCKS

Stormwater Pollutants

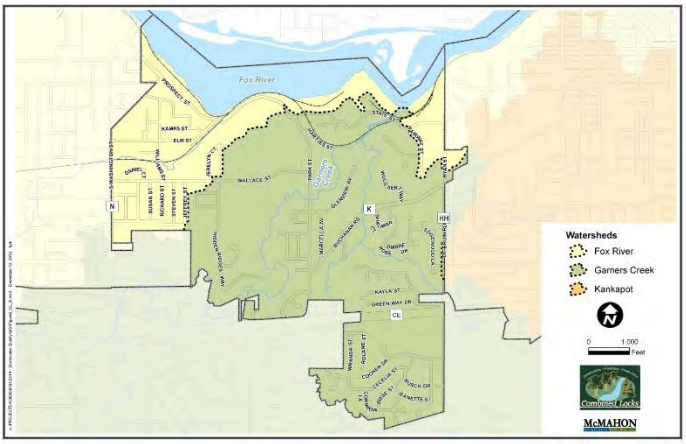
When it rains or snow melts, stormwater runoff flows across the surface of streets, parking lots, driveways, sidewalks, roofs, lawns, and other surfaces. As the water flows, stormwater runoff collects and carries away pollutants such as sediment, fertilizer, pesticides, grass clippings, leaf debris, litter, pet waste, soap, motor oil, and antifreeze. Some pollutants are partially removed by pollutant reduction practices, such as wet detention ponds. Other pollutants are not reduced before discharging into local streams, rivers, and lakes.

How Can I Help Reduce Stormwater Pollutants?

Stormwater pollution occurs from a wide variety of activities. Each of us can contribute to the problem without fully realizing. You can help reduce pollution by keeping potential pollutants away from storm drains, ditches, and waterways. Actions that landowners and businesses can take to help reduce the amount of stormwater pollutants discharged into local water bodies are described in the following materials:

- Pet Waste — Topic 2 (Good-Dog-Good-Owner.pdf)
- Kids Can Help Too — Topic 3 (Kids-can-help-too.pdf)
- Vehicle Washing — Topic 2 (Vehicle-Maintenance.pdf)
- Lawn Care & Fertilizers — Topic 3 (The-Perfect-Lawn.pdf)
- Leaves & Yard Waste — Topic 3 (Leave-Your-Leaves-on-Land.pdf)
- Residential Infiltration — Topic 5 (The-Perfect-Landscape-7-9-19.pdf)
- Streams & Shorelines — Topic 4 (Restore-Your-Shore-extended-margins.pdf)
- Green Infrastructure — Topic 6 & 8 (Green_Infrastructure_brochure_final.pdf)
- Construction — Topic 6 (Construction-BMPs-Erosion-Sediment-Control.pdf)
- Household Waste — Topic 2 (Household-Hazardous-Waste.pdf)
- Pool / Spa Discharge — Topic 1 (Pool-Spa-Discharge.pdf)
- Power Washing — Topic 1 (Power-Washing.pdf)
- Carpet Cleaning — Topic 1 & 7 (Carpet-Cleaning.pdf)

Stormwater Pollutants Are Regulated in the Village



The U.S. Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (DNR) require the Village to operate its stormwater system in conformance with the WPDES Municipal Stormwater Discharge Permit. The purpose of the MS4 Permit is to regulate and reduce pollutants discharged into local water bodies. The Village discharges into the Fox River and Garners Creek. Each year, the Village submits an annual report to the Wisconsin DNR, which summarizes its permit activities from the prior calendar year. A copy of the Village's most recent MS4 Annual Report is provided below.

- Village's 2020 MS4 Annual Report

In 2012, the EPA approved a Total Maximum Daily Load (TMDL) or "pollution diet" for the Fox River and Garners Creek. The TMDL requires the Village and other local municipalities to develop programs and construct improvements in order to reduce discharges of sediment and phosphorus into the Fox River and Garners Creek, with the goal of improving water quality. As part of the process, the Wisconsin DNR requires each regulated municipality to develop a TMDL Action Plan to reduce pollutants in urban stormwater runoff, including the Village. For additional information on Wisconsin's TMDL process and the TMDL report for the Lower Fox River Basin, please visit the following DNR webpage link.

- https://dnr.wisconsin.gov/topic/TMDLs/TMDLReports.html

Renew Our Waters

Every choice counts.

GOOD DOG, GOOD OWNER

You can be a responsible pet owner and protect our waters.

Your dog brings a lot of joy to your life. Enjoying your four legged friend doesn't need to come at the price of clean water. We can have both. But to make it happen, we all need to think a little differently.

MORE TO WASTE THAN MEETS THE EYE

Pet waste is not only an unpleasant find on a yard or sidewalk, it carries bacteria that causes beach closings in the summer.

Pet waste is not only an unpleasant find on yard or sidewalk, it carries bacteria that make beach closing necessary in the summer.

Campylobacteriosis and salmonellosis are often the cause of the "24-hour bug". They're transferred through fecal material from an infected person or animal.

Toxoplasmosis is carried by a single-cell parasite that lives in infected animal feces (typically cats). In pregnant women, it can pass through the umbilical cord to the unborn fetus, causing serious abnormalities.

WASTE DISPOSAL

Prevent bacteria in our streams by carrying small plastic bags when walking your dog. Collect droppings, tie a knot in the bag, and dispose of it properly. Do not throw pet waste down the sewer.

At home, pick up pet waste often. Even waste in your backyard can pollute local waterways. You can flush the waste down the toilet, put it in your trash can (be sure to check your local ordinances first!) or bury it in your yard.

Stormwater is rain or snowmelt and water from things people do, like overwatering the lawn. As water makes its way to the storm drain it picks up pollutants like oil from car leaks and bacteria from pet waste. When we choose products carefully and dispose of products properly, we can greatly reduce the amount of pollution that enters our local waters through runoff.

Untreated runoff is the biggest threat to our nation's water quality, according to the U.S. Environmental Protection Agency. Let's make the small, important changes that will reduce that threat and improve water quality and our lives!

Realize

What touches the ground enters the water

Northeast Wisconsin Stormwater Consortium
P.O. Box 1861 Appleton, WI 54912 | 920.915.5767

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KIDS CAN HELP TOO!

There are lots of things kids can do to help keep our rivers and lakes clean.

Have you ever thought about where rain goes after it lands on your house or drive-way? Rain drops roll down your driveway and into the road. Once in the road, rain enters the storm drain - the grates that are in city streets.

Do you know what happens to things that enter the storm drain? Water or any thing else that enters those drains travel through pipes that empty right into our rivers and lakes!

You can help clean up our local rivers and lakes by making sure that only rain goes down the storm drain.

You can help clean up our local rivers and lakes by making sure that only rain goes down the storm drain!

CLEAN UP AFTER YOUR PET!

Pet waste is not only gross to find in yards or on sidewalks, it carries bacteria and germs that cause beach closings in the summer. To keep our waters clean, pick up after your pet often. Even waste in your backyard can pollute local waters. Bring a small plastic bag with you on walks and pick up after your dog.

HELP WITH THE YARD

Grass clippings and leaves from our yards are causing our lakes and rivers to turn green! You can help by sweeping grass clippings off your driveway and sidewalk back onto your lawn after your mom or dad mows the grass. You can also help your dad and mom rake up the leaves in your yard in the fall!

GET SOME EXCERCISE

You may have heard that car and trucks can cause air pollution but did you know that driving cars and trucks can also affect water? Oil, grease and dirt that fall from our vehicles when we are driving are washed into storm drains and into our rivers and lakes. One way to help clean up water is to drive less. Instead of asking for a ride, ask your mom or dad if you can walk or bike with them to a friend's house or the park!

Most importantly, never put anything down the storm drain. The fish and frogs and especially your friends don't like to swim with garbage! Only rain should go into the drain!

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VEHICLE MAINTENANCE

Get where you need to go and minimize the impact on local waters.

We don't think much of jumping in the car and running to the store. You may have heard that air quality is affected by vehicle emissions but have you realized that our quick trips affect our area waters? Read these tips. Help us change one habit at a time so that we can enjoy good fishing, swimming, paddling and waterskiing when our running about is done.

WASHING

When you wash a car in a driveway or street, wash water flows into the storm sewer system and directly to local rivers - along with dirt, emissions and detergent. You can avoid this by using a commercial car wash, where systems direct wash water to the local wastewater treatment facility and oil, grease, detergent, sand, and grime are removed.

When you're tempted to put off repairs or the six-month maintenance check, think again. When your car performs better, our waters fare better, too.

If you must wash your car at home, use biodegradable soap, wash it on your lawn or on other unpaved areas to keep runoff out of storm sewers or ditches, and dispose of leftover washwater in the toilet or sink.

MAINTENANCE

From time to time, we've all noticed an oily sheen on water in streets and parking lots. It's the result of small leaks, accumulated residues, and fuel overfills from our cars. When a vehicle is maintained, fewer leaks spill onto streets and highways and fewer contaminants enter our streams.

So when you're tempted to put off repairs or the six-month maintenance check, think again. When your car performs better, our waters fare better, too.

MINDFUL DRIVING

We all know air quality is affected by vehicle emissions. But did you know emissions can also affect water quality? Tiny particles emitted from tail pipes settle on roadways, wash into storm sewer systems, then flow into rivers and streams. Their impact may seem small, but when you consider all the vehicles traveling on our roads, the impact is clear.

Street sweeping can minimize the impact of this pollution but rain and melting snow still carry contaminants to storm sewers. One way we can reduce this pollution is to drive less. Plan trips so you accomplish several things at once. Use public transportation. Even better, walk or ride your bike.

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THE PERFECT LAWN

You can create a beautiful outdoor space and protect our waters.

A gorgeous home landscape doesn't need to come at the price of clean lakes and streams. We can have both. But to make it happen, we all need to think a little differently. Read these tips. Post this sheet in your garage near the lawnmower and garden tools. This will help us change one habit at a time, so we have good fishing, swimming, paddling and waterskiing when the work is done.

MOWING

Mow often, when the grass is 3.5 inches or shorter. Set your mower blade at 2.5 inches and let cuttings fall. Cuttings keep the soil moist and restore nutrients over time. Any mower works, but a mulching mower shreds grass finely, so you don't have to be as careful about grass height.

A healthy, mulched lawn outcompetes weeds for light, nutrients, and water. In areas where it's hot, consider prairie grasses or wild flowers instead of turf grass.

Make an effort not to blow cuttings onto pavement. If you do, sweep them up, then lay them around the roots of shrubs or vegetable plants where they help retain moisture.

If grass gets long and you decide to collect clippings, put them in a pile with other yard waste and let them decompose. Turn the pile now and then, and in 3-6 months you'll have rich organic matter that will make almost anything in your yard grow better.

FERTILIZING & WEED CONTROL

Chemicals and weed killers are not needed for a healthy lawn, and they're one of the main reasons we have green algae in our lakes and streams.

Think before you buy. Get a soil test so you know if your lawn needs more nutrients. Mulch to keep the lawn healthy, so it can outcompete weeds for light, nutrients and water. If you must fertilize, do it in the fall. Sweep up fertilizer that falls in the street and dispose of it properly—water and fertilizer that go into the street go directly to the river or lake.

WATERING

When watering is needed, use a sprinkler that shoots low to the ground. Sprinkle soil, not the street. Shape soil so water will sink in, rather than run off. When you mow, mulch cuttings to retain moisture.

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LEAVE YOUR LEAVES ON LAND

Fall leaves provide beautiful color on trees, but in local waters they contribute to algal blooms. Leaves are a leading contributor of phosphorus in our waters.

Properly cleaning up your yard in the fall will help keep our local waters clean too! Read these tips. Post this sheet in your garage near your rakes. Working together to keep leaves out of the storm drain and out of local waters will help keep green on the land and out of the water.

KEEP YOUR LEAVES ON YOUR PROPERTY

A great way to make sure leaves do not end up in local waters is to keep them on your property!

Mulch leaves in place by making several passes over the leaves with a mulching mower. This will keep leaves on your lawn and provide it with nutrients it needs for healthy grass next spring.

Collect mulched leaves and spread them in garden beds or under shrubs. Leaves provide valuable protection for plants through the winter and also provide nutrients for spring growth.

Composting is recycling your lawn trimmings and turning them into a valuable resource for your garden or houseplants!

COMPOSTING

Composting is recycling your lawn trimmings and turning them into a rich soil, know as compost - a valuable resource for your garden or houseplants.

Cold composting requires little maintenance but can take up to 2 years to complete. To create a cold compost pile, mix non-woody yard wastes and let them sit.

Hot composting requires regular maintenance such as turning and watering, but can create compost in typically 1-3 months time. To create a hot compost pile, mix equal amounts of high nitrogen “greens” (wet and soft materials such as grass clippings) and high-carbon “browns” (dry and woody materials such as dead leaves) with 10% bulky materials such as wood chips. The mix should remain moist but not wet and should be turned often.

More information on Composting can be found on the internet.

RAKING & COLLECTION

If you decide to collect your leaves for removal from your yard, follow your community leaf collection policies and schedules. Put a tarp over leaf piles between pick-up times to prevent them from blowing away. Remove leaves and debris from the gutters and storm sewer inlets.

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THE PERFECT LANDSCAPE

You can create a beautiful outdoor space and protect our waters.

A gorgeous home landscape doesn't need to come at the price of clean lakes and streams. We can have both. But to make it happen, we all need to think a little differently.

LESS HARD SURFACE

The more concrete or blacktop your property has, the more water will run off the property and into storm drains and ditches. Seventy-five percent more rain water sinks into the ground in a natural versus developed area. Stormwater that flows from developed areas also carries oil, grease, fertilizer, bacteria, exhaust particles, etc. Planning for minimal hard surface on your property makes good sense. Consider the amount of runoff that will be generated by roofs, pavement and sidewalks. Focus on natural plantings to slow water so that it filters into the ground rather than runs off. Where needed, install pavement such as open bricks that allow water to sink into the ground.

75% more rain water sinks into the ground in a natural vs. developed area.

Minimizing runoff reduces damage to your property and others down stream. It may also save you money if you live in a city that has a stormwater utility, since storm water utility fees are based on the amount of runoff your property sends to the storm sewer system.

RAIN GARDENS

Rain gardens are slight depressions in a yard that act as receiving areas for rain water that runs off your roof and downspouts. Rain gardens capture rainwater before it picks up oil, grease, fertilizer, pet waste or other contaminants. Rain gardens replenish groundwater by infiltrating runoff, rather than passing it into the stormwater system. Often they're planted with native plants that thrive on moisture, but can withstand a dry period, too.

RAIN BARRELS

A rain barrel captures water that flows from a roof through downspouts. Commonly, the rain barrel is a 55-gallon drum designed specifically to hold water without creating a mosquito breeding habitat. A tight fitting lid, seal for the downspout, and filtered overflow valve allow overflow water to move away from the rain barrel.

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Restore Your Shore

Redefining the "perfect" shoreline will provide beauty and color to the shoreland, increase habitat for wildlife and ultimately increase water quality.

The number of people living near and using Northeast Wisconsin's waters is at an all time high and continues to increase. You may have purchased your water front property because you enjoy fishing, swimming, boating, bird watching or simply unwinding by dangling your feet in the water. As more and more of us buy or build homes on the shores of our lakes and rivers, we threaten the very qualities that brought us there.

"Perfect Shoreland Lot" - Not so Perfect

Decades of traditional lawn maintenance have led to ideas about what the "perfect shoreland lot" should be. Large lawns mowed all the way to the water's edges and no aquatic vegetation are seen at properties on lakes and rivers across Wisconsin. Creating this "perfect shoreland lot" has led to a serious loss of natural shoreland habitat and poor water quality on thousands of lakes.

To protect our waters and the recreation we enjoy, we must redefine our definition of the perfect shoreland lot and begin to landscape for wildlife and water quality.

What's the Problem?

Plants that were a natural part of the water's edge prior to development provided more than beauty and color to the shoreland. Plants, both living and dead, provided habitat for wildlife both in and out of the water. Water quality is improved when the plant and animal community on the water's edge thrives. Native plants on the shore and in the water filter pollutants entering the water. By altering the water's edge of our lakes and rivers, we have destroyed habitat, disrupted the natural balance and decreased water quality.

Bringing "Natural" back to Nature

To protect our waters and the recreation we enjoy we need to redefine our definition of the perfect shoreland lot and begin to landscape for wildlife and water quality. Create a buffer zone, which is a natural strip of vegetation along your property's frontage. The goal of a bufferstrip is to restore the shoreline, both on shore and in the water, with the vegetation that occurred there naturally. This includes, trees, shrubs, wildflowers, shoreline plants, grasses and submersed aquatic vegetation. For more information on shoreland restoration visit our website RenewOurWaters.org.

Northeast Wisconsin Stormwater Consortium
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EPA
United States
Environmental Protection
Agency

Different SHADES of green

GREEN INFRASTRUCTURE RESEARCH
at the U.S. Environmental Protection Agency

The Problem with Water Runoff

Conventional stormwater infrastructure, or gray infrastructure, is largely designed to move stormwater away from urban areas through pipes and conduit. Runoff from these surfaces can overwhelm sewer systems and end up contaminating local waterways. When stormwater runs off impervious streets, parking lots, sidewalks, and rooftops, it moves pollutants such as motor oil, lawn chemicals, sediments, and pet waste to streams, rivers, and lakes. Runoff flows can also cause erosion and flooding that can damage property, infrastructure, and wildlife habitat. In addition to runoff problems, impervious surfaces also prevent water from penetrating the soil and recharging groundwater supplies.

What is Green Infrastructure?

Green infrastructure uses plants, soils, landscape design, and engineered techniques to retain, absorb, and reduce polluted stormwater runoff. Green infrastructure prevents or reduces the amount of runoff that flows directly into storm drains and can be a vital tool for cities to address combined sewer overflows and nutrient impairment. It provides many environmental, social, and economic benefits that promote urban livability, such as improved surface water quality, water conservation, and improved aesthetic and property value. EPA is developing innovative tools for communities to use for planning and installing green infrastructure for achieving its many benefits.

Types of Green Infrastructure Practices

Permeable Pavements are porous paved surfaces that allow rain to infiltrate into soils. Permeable pavements can be constructed from various materials such as pervious concrete, porous asphalt, and permeable interlocking pavers.

Rain Gardens are depressed areas in the landscape, planted with grasses, flowers, and other plants, that collect rain water from a roof, driveway, or street and allows it to infiltrate into the ground. Rain gardens can also help filter out pollutants in runoff and provide food and shelter for butterflies, song birds, and other wildlife. More complex rain gardens with drainage systems and amended soils are often referred to as bioretention cells.

Bioretention Cells (or Bioswales) are depressions that contain vegetation grown in an engineered soil mixture placed above a gravel drainage bed which slow, infiltrate, and filter runoff. They provide storage, infiltration, and evaporation of both direct rainfall and runoff captured from surrounding areas. As linear features, bioretention cells are particularly well suited to being placed along streets and parking lots.

Vegetative Swales are channels or depressed areas with sloping sides covered with grass and other vegetation. They slow down the conveyance of collected runoff and allow it more time to infiltrate the native soil beneath it.

Infiltration Trenches are narrow ditches filled with gravel that intercept runoff from upslope impervious areas. They provide storage volume and additional time for captured runoff to infiltrate the native soil below.

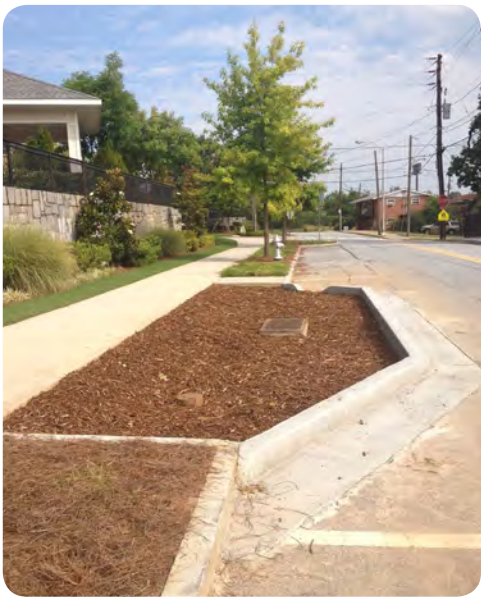
Green Roofs are a variation of a bioretention cell. Green roofs have a soil layer laying atop a special drainage mat material that conveys excess percolated rainfall off of the roof. They contain vegetation that enable rainfall infiltration and evapotranspiration of stored water. Green roofs are particularly cost-effective in dense urban areas where land values are high and on large industrial or office buildings where stormwater management costs are likely to be high.

Planter Boxes are structures with vertical walls and open or closed bottoms filled with gravel, soil, and vegetation that collect and absorb runoff. They are ideal for space-limited sites in dense urban areas.

Rainwater Harvesting systems, such as rain barrels and cisterns, collect and store rainfall for later use. These systems provide a renewable water supply and can slow and reduce runoff. Rainwater harvesting can reduce demands on increasingly limited water supplies in arid regions.

Rooftop (Downspout) Disconnection allows rooftop rainwater to discharge to pervious landscaped areas and lawns instead of directly into storm drains. You can use it to store stormwater and/or allow stormwater to infiltrate into the soil. Downspout disconnection could be especially beneficial to cities with combined sewer systems.

Urban Tree Canopies intercept rain in their leaves and branches, thereby reducing and slowing stormwater runoff.



Integrating
Green Infrastructure Practices

Green Parking integrates green infrastructure elements such as permeable pavements and rain gardens into a parking lot design. Such structures manage stormwater on site, mitigate urban heat islands, and create a more pedestrian-accessible environment.

Green Streets and Alleys integrate green infrastructure elements such as bioswales, planter boxes, and trees into street and alley design. Green streets and alleys are designed to store, infiltrate, and evaporate and transpire stormwater while adding aesthetics to landscapes.

Protecting Existing Green Spaces

In addition to green infrastructure practices, communities can also address water quality and flooding impacts of urban stormwater by protecting open spaces and sensitive natural areas within and adjacent to a city while providing recreational opportunities for city residents. Natural areas that should be a focus of these land conservation efforts include riparian areas, wetlands, and steep hillsides.

Environmental and Economic Benefits of Green Infrastructure

Introducing green infrastructure to communities has many environmental and economic benefits. Green infrastructure can be a cost-effective approach to improve water quality and help communities stretch their infrastructure investments further by providing multiple environmental, economic, and community benefits.

Examples of environmental benefits:

- Improved water quality and increased water supply
- Reduced flooding
- Improved air quality
- Greater resilience to climate change
- Increased habitat improvement and connectivity
- Healthier communities

Examples of economic benefits:

- Increased property values
- Reduced filtration costs
- Infrastructure cost savings
- Reduced private and public costs

Green Infrastructure Research

EPA's green infrastructure research supports the increased adoption of both constructed and natural green infrastructure into communities.

Models and decision support tools

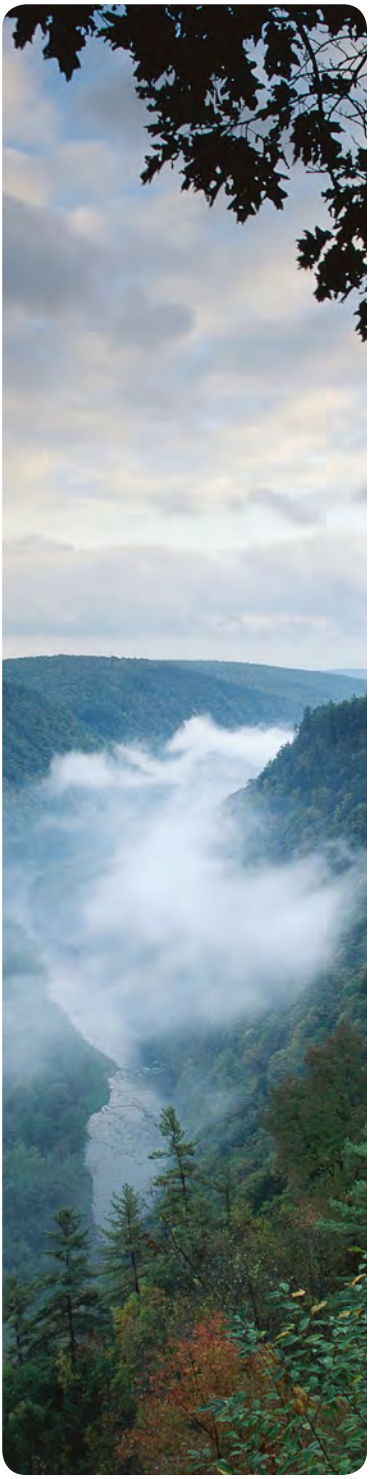
EPA researchers are analyzing and refining existing models and tools designed to increase green infrastructure practices in communities. This research will support decision-makers and allow further inclusion of green infrastructure practices into management plans that support sustainability goals.

Impacts of green infrastructure on groundwater resources

EPA is researching the impacts of green infrastructure on groundwater resources to provide the basis for long-term research on the efficacy of green infrastructure as a best management practice for water resources enhancement, particularly in arid and semiarid regions.

Assessment of risks posed to natural wetlands used for wastewater and stormwater management

EPA is reviewing the impacts of wastewater and stormwater on natural wetlands and riparian areas. This research will help guide decisions by regions, states, tribes, and local municipalities when incorporating green infrastructure with natural wetlands and riparian areas as part of stormwater and wastewater management plans.



EPA Research *in Action*

Urban Soil Assessment

Sewer system overflows can put cities in violation of the Clean Water Act. EPA researchers developed soil survey assessment protocol to identify the urban imprint on major US soils. The research helps urban planners, land managers, and sewer districts understand the potential for soils to support green infrastructure applications. It provides an overview of urban soils and offers recommendations for how soils can be rehabilitated to support green infrastructure or urban agriculture.

Transforming Cleveland's Vacant Lots

Based on technical guidance from EPA experts, Cleveland, Ohio has incorporated a green infrastructure pilot program into their CSO control plan. This program takes advantage of the city's excess vacant land, turning that land into green spaces that can soak up stormwater and keep excess water out of the sewer system.

The transformation of urban vacant lots into park-like gardens that catch stormwater runoff not only helps remedy the CSO problem, but also improves the social and economic fabric of neighborhoods lacking green spaces.

Daylighting Streams to Improve Water Quality

Researchers compared the effectiveness of buried streams (streams that are paved over or routed into underground pipes during urban development) and open-air or daylighted streams at removing harmful nitrogen. The research

shows daylighted streams are more effective at removing nitrates due to interactions with plants and other organic matter that feed on nitrates. Daylighting streams could prove to be a sustainable method for removing nitrogen and improving water quality.

Green Infrastructure at Fort Riley

Researchers with EPA's Net Zero Program are working with the U.S. Army, U.S. Army Corps of Engineers, Kansas Unified School District 475, and other partners to demonstrate and assess green infrastructure technologies and performance at Fort Riley, an Army base in Kansas. EPA researchers are testing a permeable parking lot at Seitz Elementary School, which is located on Fort Riley. Researchers will measure how much rainwater passes through the pavement, how fast the permeable pavement clogs with debris, and changes in groundwater chemistry. They are also monitoring the school's existing stormwater-capture-use system, which is a set of storage tanks that capture rain runoff. For this part of the study, researchers are measuring the amount of rooftop runoff that is captured and the chemistry of the water stored in the tanks.

Cincinnati Green Infrastructure Efforts

The Lick Run stream in Cincinnati, Ohio is a part of a combined sewer system that spills its polluted mixture into the nearby Mill Creek during storm events. EPA researchers collaborated with the local sewer district to monitor and adjust several green infrastructure early success projects that are designed to reduce the amount of stormwater entering combined sewers and put it to good use elsewhere.

Images above: vacant lot before and after transformation to green space and pervious pavement.

EPA Models and Tools

EPA is developing innovative tools, technologies, and strategies for communities to manage water resources with green infrastructure to move toward more natural hydrology and increased resilience to future changes such as climate and extreme events.

Green Infrastructure Wizard (GIWiz)

GIWiz is an interactive web application that connects communities to EPA green infrastructure tools and resources. GIWiz provides users with customized reports containing EPA tools and resources they select, direct links, and overview information about each.

Watershed Management Optimization Support Tool (WMOST)

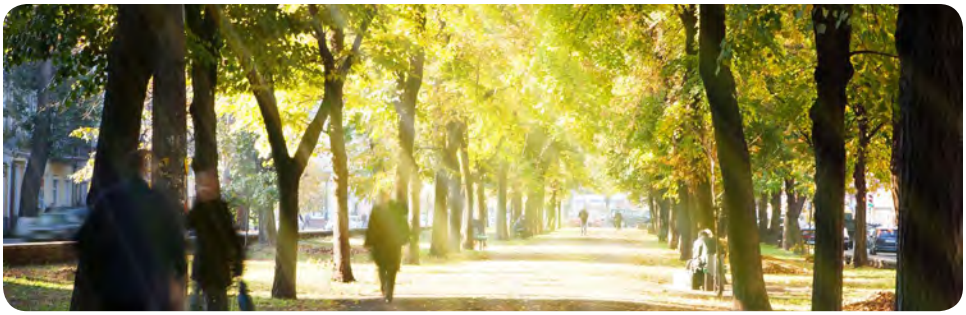
WMOST is a software application designed to facilitate integrated water resource management across wet and dry climate regions. The tool allows water-resource managers and planners to screen a wide range of practices, including low impact development or green infrastructure, across a watershed for cost-effectiveness as well as environmental and economic sustainability.

Visualizing Ecosystems for Land Management Assessment (VELMA)

VELMA is a computer software eco-hydrological model used to quantify the effectiveness of natural and engineered green infrastructure management practices for reducing nonpoint sources of nutrients and contaminants in streams, estuaries, and groundwater.

Storm Water Management Model (SWMM)

SWMM models hydrology and hydraulics to simulate the movement of water through the landscape and into and through sewer systems. A green infrastructure module was added to SWMM in 2010 to simulate the integration of green infrastructure practices, ranging from green roofs to permeable parking lots, into a community's stormwater management plan. SWMM is widely used throughout the world and considered the "gold standard" in the design of urban wet-weather flow pollution abatement approaches, and allows users to include any combination of low impact development/green infrastructure controls to determine their effectiveness in managing stormwater and sewer overflows.



SWMM Climate Adjustment Tool (SWMM-CAT)

SWMM was updated to include a software utility that allows future climate change projections to be incorporated into modeling. SWMM-CAT provides a set of location-specific adjustments derived from World Climate Research Programme global climate change models. SWMM-CAT accepts monthly adjustment factors for climate-related variables that could represent the potential impact of future climate changes.

National Stormwater Calculator (SWC)

SWC is a desktop application that estimates the annual amount of stormwater runoff from a specific location in the United States (including Puerto Rico), based on local soil conditions, land cover, and historic rainfall records. It is used to inform site developers on how well they can meet a desired stormwater retention target with and without the use of green infrastructure. It also allows users to consider how runoff may vary based both on historical weather and potential future climate. SWC is a resource for all Rainwater Management Credits in LEED by the U.S. Green Building Council for all project types in all rating systems.

Greening EPA

EPA has buildings in over 40 locations across the country that are committed to promoting the Agency's mission to protect human health and the natural environment by incorporating sustainability wherever possible. To support this commitment and provide an opportunity for needed research, EPA constructed an experimental parking lot with rain gardens as part of a long-term research project to quantify the effects of different permeable surfaces on stormwater runoff and the ability of rain gardens to accept, store and infiltrate stormwater.

Additional Information:

Green Infrastructure Research:
https://www.epa.gov/water-research/green-infrastructure-research

Green Infrastructure Overview:
https://www.epa.gov/green-infrastructure

Greening EPA:
https://www.epa.gov/greeningepa

Contact:

EPA's Office of Research & Development, Safe and Sustainable Water Resources Research Program, sswr@epa.gov

Stormwater and the Construction Industry

Protect Natural Features

Bad

Good

- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing

Bad

Good

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers

Bad

Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing

Bad

Good

- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Site Stabilization

Bad

Good

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances

Bad

Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes

Bad

Good

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles

Bad

Good

- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection

Bad

Good

- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

Stormwater and the Construction Industry

Planning and Implementing Erosion and Sediment Control Practices

The construction industry is a critical participant in the nation's efforts to protect streams, rivers, lakes, wetlands, and oceans. Through the use of best management practices (BMPs), construction site operators are the key defense against erosion and sedimentation.

As stormwater flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. High volumes of stormwater can also cause stream bank erosion, and destroy downstream aquatic habitat. Preventing soil erosion and sedimentation is an important responsibility at all construction sites.

In addition to the environmental impact, uncontrolled erosion can have a significant financial impact on a construction project. It costs money and time to repair gullies, replace vegetation, clean sediment-clogged storm drains, replace poorly installed BMPs, and mitigate damage to other people's property or to natural resources.

Best Management Practice (BMP)
A BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local waterbodies. Silt fences, inlet protection, and site-stabilization techniques are typical BMPs on a construction site.

Operator
An operator is someone who has control over and the ability to modify construction plans and specifications (e.g. owner, general contractor)

or

Someone who has control over the day-to-day operations at a site (e.g., owner, general contractor) that are necessary to ensure compliance with the permit requirements. It is the responsibility of a construction site owner or operator to contain stormwater runoff and prevent erosion during **all** stages of a project.

There may be more than one person at a site who meets these definitions and must apply for permit coverage. (States may have different definitions of the term "operator.")

So what's being done about polluted runoff?

The Clean Water Act includes the National Pollutant Discharge Elimination System (NPDES) permitting program. As of January 2003, 44 states and territories are authorized to issue NPDES stormwater permits. If your state isn't authorized to operate the NPDES stormwater permit program, EPA issues the permits. Permits vary from state to state, so contact your state or EPA for specific information. Your permitting authority has specific information on your state's NPDES stormwater permit program. In general, construction permits require construction operators to do all of the following:

- Develop and implement a stormwater pollution prevention plan
- Submit a permit application or notice of intent (NOI)
- Comply with the permit, including maintaining BMPs and inspecting the site

Under the NPDES program, construction activities that disturb 1 or more acres are required to obtain stormwater permit coverage. States have different names for the plans that construction operators must develop, such as

- Stormwater pollution prevention plan
- Erosion and sediment control plan
- Erosion control and stormwater management plan
- Stormwater management plan
- Water pollution control plan
- Pollution prevention plan

This document uses the term "*Plan*."

I think I need a permit... Where do I start?

All land-disturbing activities, including clearing, grading, and excavation, that disturb **1 or more acres** are required to be covered under a state or EPA-issued NPDES construction stormwater permit **prior to land disturbance**. Permit requirements vary by state. Begin by researching the specific requirements in your state. You might already be subject to local erosion and sediment control requirements, but that doesn't release you from the requirements of the NPDES program at the state or EPA level. Although you must comply with both sets of requirements, in most cases they have been designed to be complementary. Contact your permitting authority to find out exactly what you need to do. A good place to start your search is the Construction Industry Compliance Assistance web site at http://www.envcap.org/cica.

The NPDES permit requirements include small construction activities that are part of a larger common plan of development or sale, such as a single lot within a larger subdivision. For developments with multiple operators, all operators must have permit coverage for their individual parts of the larger development, no matter how large or small each operation happens to be. When there are multiple operators at one site, they're encouraged to develop and share one comprehensive Plan and obtain permit coverage as co-permitees.

The **owner or operator** of the construction site is responsible for complying with the requirements of the permit. Responsibilities include developing a Plan, obtaining permit coverage, implementing BMPs, and stabilizing the site at the end of the construction activity.

Construction sites that discharge unpermitted stormwater are in violation of the Clean Water Act and may be subject to fines of up to $27,500 a day per violation.

Determine your eligibility

All construction activity that disturbs 1 or more acres of land, as well as activity that disturbs less than 1 acre but is part of a larger common plan of development, must obtain permit coverage.

Read and understand your stormwater permit requirements

Get a copy of the permit for construction activities and a permit application (or notice of intent form) from your state or EPA permitting authority.

Develop a Plan

Most states do not require you to submit your Plan. However, you do need to keep the Plan on site. If that's impractical, you may post a notice that tells where the Plan is kept so it can be accessed by the permitting authority and other interested parties.

You'll need to post a copy of your completed application on site. Put it in a place where the public can see it so they'll know your site is covered by an NPDES permit!

Apply for permit coverage

Once you understand your permit requirements and have developed a Plan, you can submit a stormwater permit application (or notice of intent) to your permitting authority. This must be done before beginning any land disturbance on the site. Some states require a few days of lead time, so check with your permitting authority. Once you've submitted the application, you must satisfy the conditions of the permit.

Implement the Plan

Be prepared to implement the BMPs in your Plan before construction begins. Ensure that BMPs are properly maintained, and upgrade and repair them as necessary.

Developing and Implementing a Plan

You must have a Plan that includes erosion and sediment control and pollution prevention BMPs. These Plans require

- Advance planning and training to ensure proper implementation of the BMPs
- Erosion and sediment control BMPs in place until the area is permanently stabilized
- Pollution prevention BMPs to keep the construction site "clean"
- Regular inspection of the construction site to ensure proper installation and maintenance of BMPs

Fortunately, the practices and measures that must be included in your Plan are already part of the standard operating procedures at many construction sites.

Six steps are associated with developing and implementing a stormwater Plan. There's a wealth of information available on developing pollution prevention plans. Please contact your permitting authority for help in finding additional guidance materials, or visit www.epa.gov/npdes/stormwater. A sample construction plan is available at www.epa.gov/npdes/pubs/sample_swppp.pdf.

1. *Site Evaluation and Design Development*

- **Collect site information**
- **Develop site plan design**
- **Prepare pollution prevention site map**

The first step in preparing a Plan is to define the characteristics of the site and the type of construction that will occur. This involves collecting site information, identifying natural features that should be protected, developing a site plan design, describing the nature of the construction activity, and preparing a pollution prevention site map.

2. *Assessment*

- **Measure the site area**
- **Determine the drainage areas**
- **Calculate the runoff coefficient**

The next step is assessing the impact the project will have on stormwater runoff. Determine the drainage areas and estimate the runoff amounts and velocities. For more information on calculatng the runoff coefficient, go to www.epa.gov/npdes/pubs/chap02_conguide.pdf, page 11.

3. *Control Selection and Plan Design*

- **Review and incorporate state or local requirements**
- **Select erosion and sediment controls**
- **Select other controls**
- **Select stormwater management controls**
- **Indicate the location of controls on the site map**
- **Prepare an inspection and maintenance plan**
- **Coordinate controls with construction activity**
- **Prepare sequence of major activities**

In the third step you'll actually document your procedures to prevent and control polluted stormwater runoff. You must delineate areas that will not be disturbed, including critical natural areas like streamside areas, floodplains, and trees. You must also identify the measures (or BMPs) you'll use to protect these areas.

Phasing your project to minimize the amount of exposed soil at any given time is a highly effective way to prevent erosion. Erosion control measures designed to prevent soil from being mobilized include diversions to route stormwater away from exposed soils and stabilization with vegetation, mulch, and geotextiles. Sedimentation control measures designed to remove sediment from stormwater or prevent it from leaving the site include silt fences, sediment traps, and diversions.

You'll need to select erosion and sediment controls—including stabilization measures for protecting disturbed areas and structural controls for diverting runoff and removing sediment—that are appropriate for your particular site. The appropriateness of the control measures will depend on several factors, but will be influenced most directly by the site characteristics. Some stabilization measures you might consider are temporary seeding, permanent seeding, and mulching. Structural control measures include earth dikes, silt fences, and sediment traps. No single BMP will meet all of the erosion and sedimentation control needs of a construction site. A combination of BMPs is necessary. For more information on the types of BMPs appropriate for your construction site, see the BMP fact sheet series available at www.epa.gov/npdes/menuofbmps.

Soil erosion control tips...

- Design the site to infiltrate stormwater into the ground and to keep it out of storm drains. Eliminate or minimize the use of stormwater collection and conveyance systems while maximizing the use of stormwater infiltration and bioretention techniques.
- Minimize the amount of exposed soil on site.
  - To the extent possible, plan the project in stages to minimize the amount of area that is bare and subject to erosion. The less soil exposed, the easier and cheaper it will be to control erosion.
  - Vegetate disturbed areas with permanent or temporary seeding immediately upon reaching final grade.
  - Vegetate or cover stockpiles that will not be used immediately.
- Reduce the velocity of stormwater both onto and away from the project area.
  - Interceptors, diversions, vegetated buffers, and check dams are a few of the BMPs that can be used to slow down stormwater as it travels across and away from the project site.
  - Diversion measures can also be used to direct flow away from exposed areas toward stable portions of the site.
  - Silt fences and other types of perimeter filters should never be used to reduce the velocity of runoff.
- Protect defined channels immediately with measures adequate to handle the storm flows expected.
  - Sod, geotextile, natural fiber, riprap, or other stabilization measures should be used to allow the channels to carry water without causing erosion. Use softer measures like geotextile or vegetation where possible to prevent downstream impacts.
- Keep sediment on site.
  - Place aggregate or stone at construction site vehicle exits to accommodate at least two tire revolutions of large construction vehicles. Much of the dirt on the tires will fall off before the vehicle gets to the street.
  - Regular street sweeping at the construction entrance will prevent dirt from entering storm drains. Do not hose paved areas.
  - Sediment traps and basins are temporary structures and should be used in conjunction with other measures to reduce the amount of erosion.
- Maintaining all BMPs is critical to ensure their effectiveness during the life of the project.
  - Regularly remove collected sediment from silt fences, berms, traps, and other BMPs.
  - Ensure that geotextiles and mulch remain in place until vegetation is well established.
  - Maintain fences that protect sensitive areas, silt fences, diversion structures, and other BMPs.

Other BMPs and Activities to Control Polluted Runoff

You'll need to select other controls to address potential pollutant sources on your site. Construction materials, debris, trash, fuel, paint, and stockpiles become pollution sources when it rains. Basic pollution prevention practices can significantly reduce the amount of pollution leaving construction sites. The following are some simple practices that should be included in the Plan and implemented on site:

- Keep potential sources of pollution out of the rain as practicable (e.g., inside a building, covered with plastic or tarps, or sealed tightly in a leak-proof container).
- Clearly identify a protected, lined area for concrete truck washouts. This area should be located away from streams, storm drain inlets, or ditches and should be cleaned out periodically.
- Park, refuel, and maintain vehicles and equipment in one area of the site to minimize the area exposed to possible spills and fuel storage. This area should be well away from streams, storm drain inlets, or ditches. Keep spill kits close by and clean up any spills or leaks immediately, including spills on pavement or earthen surfaces.
- Practice good housekeeping. Keep the construction site free of litter, construction debris, and leaking containers. Keep all waste in one area to minimize cleaning.
- Never hose down paved surfaces to clean dust, debris, or trash. This water could wash directly into storm drains or streams. Sweep up materials and dispose of them in the trash. Never bury trash or debris!
- Dispose of hazardous materials properly.

4. *Certification and Notification*

- **Certify the Plan**
- **Submit permit application or notice of intent**

Once the Plan has been developed, an authorized representative must sign it. Now is the time to submit the permit application or notice of intent. Your permit might require that the Plan be kept on site, so be sure to keep it available for the staff implementing the Plan.

Erosion and sedimentation control practices are only as good as their installation and maintenance.

5. *Implementing and Maintaining a Plan*

- **Implement controls**
- **Inspect and maintain controls**
- **Update/change the Plan**
- **Report releases of hazardous materials**

A Plan describes the practices and activities you'll use to prevent stormwater contamination and meet the NPDES permit requirements. Make sure that the Plan is implemented and that the Plan is updated as necessary to reflect changes on the site.

Erosion and sedimentation control practices are only as good as their installation and maintenance. Train the contractors that will install the BMPs and inspect immediately to ensure that the BMPs have been installed correctly.

Regularly inspect the BMPs (especially before and after rain events) and perform any necessary repairs or maintenance immediately. Many BMPs are designed to handle a limited amount of sediment. If not maintained, they'll become ineffective and a source of sediment pollution.

It's also important to keep records of BMP installation, implementation, and maintenance. Keep track of major grading activities that occur on the site, when construction activities cease (temporarily or permanently), and when a site is temporarily or permanently stabilized.

If construction plans change at any time, or if more appropriate BMPs are chosen for the site, update the Plan accordingly.

6. *Completing the Project: Final Stabilization and Termination of the Permit*

- **Final stabilization**
- **Notice of Termination**
- **Record retention**

Many states and EPA require a Notice of Termination (NOT) or other notification signifying that the construction activity is completed. An NOT is required when

- Final stabilization has been achieved on all portions of the site for which the permittee is responsible.
- Another operator has assumed control over all areas of the site that have not been finally stabilized. That operator would need to submit a new permit application to the permitting authority.
- For residential construction only, temporary stabilization of a lot has been completed prior to transference of ownership to the homeowner, with the homeowner being made aware of the need to perform final stabilization.

Permittees must keep a copy of their permit application and their Plan for at least 3 years following final stabilization. This period may be longer depending on state and local requirements.

Preconstruction Checklist

- A site description, including
  - Nature of the activity
  - Intended sequence of major construction activities
  - Total area of the site
  - Existing soil type and rainfall runoff data
  - A site map with:
    - Drainage patterns
    - Approximate slopes after major grading
    - Area of soil disturbance
    - Outline of areas which will not be disturbed
    - Location of major structural and nonstructural soil erosion controls
    - Areas where stabilization practices are expected to occur
    - Surface waters
    - Stormwater discharge locations
  - Name of the receiving water(s)
- A description of controls:
  - Erosion and sediment controls, including
    - Stabilization practices for all areas disturbed by construction
    - Structural practices for all drainage/discharge locations
  - Stormwater management controls, including
    - Measures used to control pollutants occurring in stormwater discharges after construction activities are complete
    - Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel
  - Other controls, including
    - Waste disposal practices that prevent discharge of solid materials
    - Measures to minimize offset tracking of sediments by construction vehicles
    - Measures to ensure compliance with state or local waste disposal, sanitary sewer, or septic system regulations
  - Description of the timing during the construction when measures will be implemented
- State or local requirements incorporated into the Plan
- Inspection and maintenance procedures for control measures identified in the Plan
- Contractor certification and Plan certification

Implementation Checklist

- Maintain records of construction activities, including
  - Dates when major grading activities occur
  - Dates when construction activities temporarily cease on the site or a portion of the site
  - Dates when construction activities permanently cease on the site or a portion of the site
  - Dates when stabilization measures are completed on the site
- Prepare inspection reports summarizing
  - Name of person conducting BMP inspections
  - Qualifications of person conducting BMP inspections
  - BMPs/areas inspected
  - Observed conditions
  - Necessary changes to the Plan
- Report releases of reportable quantities of oil or hazardous materials
  - Notify the National Response Center at 800-424-8802 immediately
  - Report releases to your permitting authority immediately, or as specified in your permit. You must also provide a written report within 14 days.
  - Modify the Plan to include
    - The date of release
    - Circumstances leading to the release
    - Steps taken to prevent reoccurrence of the release
- Modify Plan as necessary
  - Incorporate requests of the permitting authority to bring the Plan into compliance
  - Address changes in design, construction operation, or maintenance that affect the potential for discharge of pollutants

An ounce of prevention is worth a pound of cure! It's far more efficient and cost-effective to prevent pollution than it is to try to correct problems later. Installing and maintaining simple BMPs and pollution prevention techniques on site can greatly reduce the potential for stormwater pollution and can also save you money!

Visit www.epa.gov/npdes/stormwater for more information.

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THE YEAR OF CLEAN WATER
"Celebration & Recommitment"

Renew Our Waters

Every choice counts.

HOUSEHOLD HAZARDOUS WASTE

Cleaning out the garage and keeping our waters clean

We all have the opportunity - and the responsibility - to dispose of waste materials properly. The rule of thumb is: If you wouldn't dump it in the river, don't let it touch parking lots, soil, or any other place where it can be washed into a stream or storm drain. Post this sheet in your garage storage area as a reminder. This will help us change one habit at a time, so we have good fishing, swimming, paddling and waterskiing when the work is done.

HARMFUL SUBSTANCES

Certain household chemicals, when not used up properly, become household hazardous waste. These products can contain the same chemicals as strictly regulated industrial wastes. These products include: cleaning products and wash water, food oils and grease, automotive oil, grease and waste fluids, paint, petroleum-based solvents, rodent baits, batteries, herbicides, pesticides, concrete wash water and sidewalk salt.

If you wouldn't dump it in the river, don't let it touch parking lots, soil or any other place where it can be washed into a stream or storm drain.

HANDLE WITH CARE

To avoid the potential risks associated with household wastes, always monitor the use, storage and disposal of products with potentially hazardous substances.

PROPER DISPOSAL

All of the counties in Northeast Wisconsin have Household Hazardous Waste drop off programs or collection days. Contact your local environmental, health or solid waste agency for instructions on proper use and disposal.

USING LESS

The quantity of waste from a single household may be small, but that quantity adds up fast considering the number of households in Northeast Wisconsin. Consider reducing your purchase of products that contain hazardous ingredients.

Stormwater is rain or snowmelt and water from things people do, like overwatering the lawn. As water makes its way to the storm drain it picks up pollutants like oil from car leaks and improperly disposed of waste. When we choose products carefully and dispose of products properly, we can reduce the amount of pollution that enters our local waterways through runoff.

Untreated runoff is the biggest threat to our nation's water quality, according to the U.S. Environmental Protection Agency. Let's make the small, important changes that will reduce that threat and improve water quality and our lives!

Realize

What touches the ground enters the water

Northeast Wisconsin Stormwater Consortium
P.O. Box 1861 Appleton, WI 54912 | 920.915.5767

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Every choice counts.

FISH DON'T SWIM IN CHLORINE

Following a few simple steps will prepare your pool water for entering local waterways.

Taking the time to follow the proper procedures when discharging water from your pool or spa will help keep our local waters a healthy place for fish and other aquatic life.

DECHLORINATE THE WATER

Water from swimming pools and spas must be dechlorinated prior to discharging water. Let the water in the pool or spa sit for at least one week to reduce the chlorine or bromine level until it is undetectable and water temperature is at air temperature. Measure the pH. It should fall within a range of 6.5 - 8.5 prior to discharge.

DISCHARGE WATER TO GRASS OR LANDSCAPING

Discharging pool and spa water onto grass or landscaping will allow water to soak into the earth, where the water will be naturally cleansed prior to entering local waterways.

If irrigation on site is not possible, water may be discharged off your property - provided it is directed through a grassed surface prior to entering a curbline gutter or a paved street.

Do not fertilize prior to discharging pool water.

Discharging water onto grass or landscaping will allow water to soak into the earth.

MONITOR THE DISCHARGE

Do not let water discharge onto your neighbor's property. Monitor water as it is discharging to ensure it does not cause erosion or flooding. Discharge the water in a manner that will prevent nuisance conditions (such as creation of odors and fly and mosquito breeding conditions) due to ponding of water for a prolonged period.

PROTECT LOCAL WATERWAYS

If a pool or spa has been acid washed, the water may not be discharged off the pool/spa owner's property. Water from back flushing pool filters should only be discharged to the sanitary sewer (down a sink or toilet) or on-site septic tank system where it will be treated prior to entering local waters.

Remember it is illegal in all communities to discharge pollutants, including chlorinated pool water, into a storm drain. As a pool or spa owner, you are responsible for following your municipality's ordinance for pool and spa discharge. Contact your municipality for regulations.

Northeast Wisconsin Stormwater Consortium
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Stormwater is rain or snowmelt and water from things people do, like overwatering the lawn or discharging pool water into the street drain. We can choose products carefully and shape our lawns and pavement so water sinks in. When we do, runoff is reduced, pollutants filter out and streams and groundwater are protected.

Untreated runoff is the biggest threat to our nation's water quality, according to the U.S. Environmental Protection Agency. Let's make the small, important changes that will reduce that threat and improve water quality and our lives!

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POWER WASHING

To keep our waters clean keep your dirty water out.

Wash water from power washing activities may contain a large amount of oil, grease, chemicals, dirt and detergents. Disposing of these materials into storm drains causes serious ecological problems and is PROHIBITED by law. You could be given a citation or fined for discharging pollutants to the storm drain system.

TRY IT DRY

Instead of pressure washing, use dry methods such as mops, brooms, rags or wire brushes to clean pavement, buildings and equipment as much as possible.

Before you start, set up sandbags or other barriers to direct wash water onto grass or gravel.

PREPARING FOR POWER WASHING

Before you start, set up sandbags or other barriers to direct wash water onto grassy or gravel areas where the water will soak into the ground instead of run off into the road.

JUST ENOUGH FOR THE JOB

Minimize water by using high pressure, low volume nozzles. Use the minimal amount and least toxic detergents and degreasers you will need to get the job done. Use a mop or rags to clean heavily soiled areas before power washing.

UNDERSTANDING "BIODEGRADABLE"

"Biodegradable" is a popular marketing term that can be misleading. Because a product is labeled as biodegradable does not mean that it is non-toxic. Some products are more toxic than others, but NONE are harmless to aquatic life. Soapy water entering the storm drain system will impact the aquatic environment in our local lakes, streams and rivers.

WASHING YOUR VEHICLE

Wash vehicles and equipment on grassy or gravel areas so that the wash water can seep into the ground. If the ground is very dry, wet it first so the wash water soaks in and does not run off into the storm drain.

Stormwater is rain or snowmelt and water from things people do, like overwatering the lawn or letting fertilizer fall into the street drain. We can choose products carefully and shape our lawns and pavement so water sinks in. When we do, runoff is reduced, pollutants filter out and streams and groundwater are protected.

Untreated runoff is the biggest threat to our nation's water quality, according to the U.S. Environmental Protection Agency. Let's make the small, important changes that will reduce that threat and improve water quality and our lives!

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CARPET CLEANING

To keep our waters clean, keep your dirty water out.

Nothing feels better than walking across clean carpet, except maybe wading through clean water on a warm summer day. Unfortunately, far too often dirty wash water from carpet cleaning is dumped down the driveway and finds its way through the storm drain system to our local waters. Disposing of these materials into storm drains causes serious ecological problems and is PROHIBITED by law. By following the tips on this sheet, you can clean your home and keep our local waters clean too.

DISPOSE OF WASTEWATER PROPERLY

Wash water from carpet, drapery or upholstery cleaning must be discharged to a sink, toilet or other drain connected to the sanitary sewer system. Never discharge to a street, gutter, parking lot, ditch or storm drain. This applies even when you use cleaning products labeled "nontoxic" or "biodegradable." Using biodegradable soap does not lessen its immediate environmental impact - it simply means that the soap will degrade in time.

Using biodegradable soap does not lessen its immediate environmental impact - it simply means that the soap will degrade in time.

FILTER WASTEWATER

Before dumping your dirty water into the sanitary sewer, filter the water to make sure that any fiber or debris does not go down the drain. Debris in the wash water can clog the pipes. Dispose of the filtered material in the garbage, provided that the carpet was not contaminated with hazardous materials.

HIRING A PROFESSIONAL CLEANER

Check with the carpet cleaner you hire to ensure the used wash water is emptied into a utility sink or other indoor sanitary sewer connection. Just like you, professional cleaners should never dispose of dirty water in a street, gutter, parking lot, ditch or storm drain.

If you contract with a carpet cleaner regularly, arrange an appropriate location for the contractor to discharge wash water such as a utility sink, toilet or sewer outlet.

Stormwater is rain or snowmelt and water from things people do, like washing the car or watering the lawn. As water makes its way to the storm drain it picks up pollutants like oil from car leaks and bacteria from pet waste. When we choose products carefully and dispose of products properly, we can greatly reduce the amount of pollution that enters our local waters through runoff.

Untreated runoff is the biggest threat to our nation's water quality, according to the U.S. Environmental Protection Agency. Let's make the small, important changes that will reduce that threat and improve water quality and our lives!

Realize

What touches the ground enters the water

Northeast Wisconsin Stormwater Consortium
P.O. Box 1861 Appleton, WI 54912 | 920.915.5767

RenewOurWaters.org

Renew Our Waters

Every Choice Counts

Connecting the Drops

Realize what touches the ground can enter our waters

Sweep up Grass Clippings

Keep lawn waste out of storm drains to prevent green algae blooms and improve water clarity. Grass clippings can be easily swept back onto the lawn.

Clean up After your Pet

Pet waste carries bacteria that makes people sick and causes beach closings. Remember to scoop the poop.

Wash Vehicles on Grass

Washing vehicles in a grassy area or at a car wash facility prevents soapy water and chemicals from our cars from entering our water bodies.

Let the Water Soak in

Planning for minimal hard surface on your property makes good sense. Focus on natural plantings to slow water so that it filters into the ground rather than runs off.

Fox-Wolf Watershed Alliance

LIKE US ON facebook

For more information, visit:
www.RenewOurWaters.org

FOLLOW US ON Instagram
@Fox_Wolf_Watershed_Alliance

NEWSC

APPENDIX D

Public Involvement & Participation

Municipal Stormwater Permit

2020 Annual Report Summary to Wisconsin DNR

NICK VANDE HEY, PE
3/31/2021

McMAHON ENGINEERS ARCHITECTS

1

Federal Clean Water Act

US Environmental Protection Agency requires each state to identify water bodies that are not 'fishable or swimmable'

Each state also needs to identify the pollutants causing the water body impairment

2

Pollutants Causing Impairment

Sediment

Phosphorus

McMAHON ENGINEERS ARCHITECTS

COMBINED LOCKS

3

Total Maximum Daily Load (TMDL)

Lower Fox River Basin TMDL for phosphorus and sediment pollutants was approved by US Environmental Protection Agency on May 18, 2012

McMAHON ENGINEERS ARCHITECTS

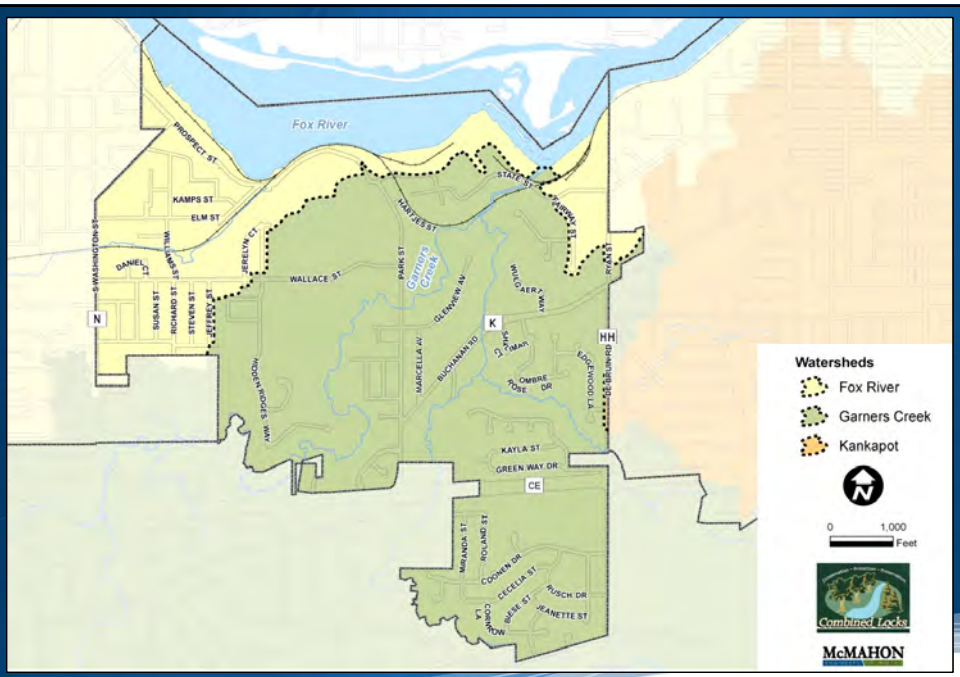
COMBINED LOCKS

4

Municipal Stormwater Permit

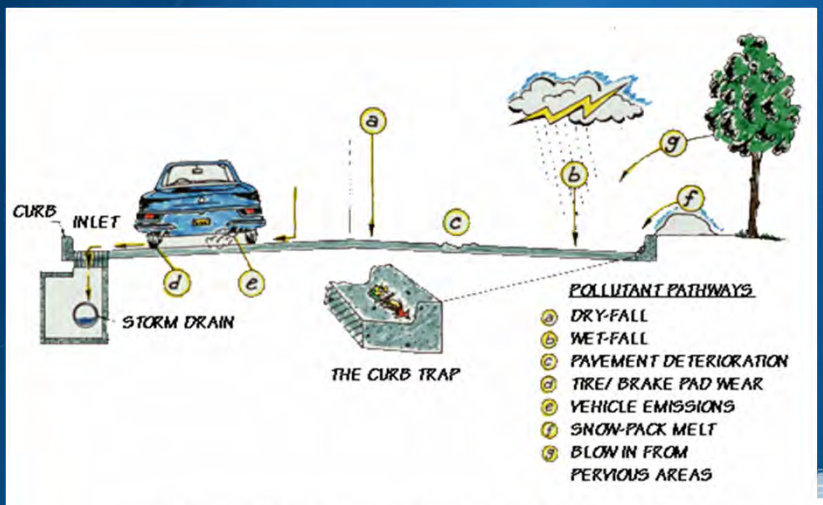
- Village received its initial Municipal Stormwater Permit from Wisconsin DNR in late 2006
- Wisconsin DNR renewed the Village's Municipal Stormwater Permit in 2019
- TMDL phosphorus and sediment allocations implemented thru Municipal Stormwater Permit

5



6

Stormwater Pollutant Pathways



KEY POLLUTANT DEPOSITION PATHWAYS ON THE STREET SURFACE

McMAHON ENGINEERS ARCHITECTS

COMBINED LOCKS

7

Permit Requirements

Public Education
Public Involvement
Illicit Discharge Detection & Elimination
Construction Site Pollutant Control
Post-Construction Stormwater Management
Municipal Pollution Prevention
Stormwater Quality Management

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WISCONSIN DEPT. OF NATURAL RESOURCES

McMAHON ENGINEERS ARCHITECTS

COMBINED LOCKS

8

Public Education

Required: 4 Topics, 4 Delivery Mechanisms (One Active)

Measurable Goals	2019	2020
1. Passive: Village Website (# hits)		
2. Passive: Brochures (# distributed / taken)		
3. Passive: Newsletter (# distributed each issue)		
4. Passive: Posters or Signs (# of posters / signs)		
5. Passive: Radio or TV (# of ads)		
6. Passive: Social Media (# of posts)		
7. Active: School Presentations / Exhibiting (# events, # attendees)		
8. Active: Training Events (# events, # participants)		
9. Active: Village Meetings / Bus Tours (# events, # attendees)		
10. Active: Volunteer Events (# events, # participants)		

9

Public Involvement

Measurable Goals	2019	2020
1. Public/Landowner Meetings (# meetings when stormwater was discussed).		
2. Public Meetings (# meetings when stormwater ordinance was discussed).		
3. Public Meetings (# attendees for MS4 Annual Report presentation).		
4. Volunteer Events (# participants).		

McMAHON ENGINEERS ARCHITECTS

10

Illicit Discharges

Measurable Goals	2019	2020
1. Number of total MS4 outfalls.		
2. Number of MS4 outfalls evaluated during routine ongoing field screening.		
3. From routine field screening, number of confirmed illicit discharges.		
4. Number of illicit discharge complaints received.		
5. From complaints received, number of confirmed illicit discharges.		
6. Number of identified illicit discharges eliminated during reporting year.		
7. Number of verbal Warning Notices issued.		
8. Number of written Warning Notices issued.		
9. Number of Notices of Violation issued.		
10. Number of Civil Penalties / Citations issued.		

11

Construction Sites

Measurable Goals	2019	2020
1. Number of total active construction sites (> 1 acre) during reporting year.		
2. Number of constructions sites (> 1 acre) issued a permit.		
3. Number of construction site inspections performed by municipality.		
4. Number of sites with no enforcement authority.		
5. Number of verbal Warning Notices issued.		
6. Number of written Warning Notices issued.		
7. Number of Notices of Violation issued.		
8. Number of Stop Work Orders issued.		
9. Number of Civil Penalties / Citations issued.		
10. Number of Forfeitures of Deposit (cash escrow, bond, letter of credit, etc.).		

12

Post-Construction Sites

Measurable Goals	2019	2020
1. Number of sites that received approval for a new structural stormwater facility.		
2. Number of privately owned stormwater facilities inspected.		
3. Number of sites with no enforcement authority.		
4. Number of verbal Warning Notices issued.		
5. Number of written Warning Notices issued.		
6. Number of Notices of Violation issued.		
7. Number of Civil Penalties / Citations issued.		
8. Number of Forfeitures of Deposit (cash escrow, bond, letter of credit, etc.).		
9. Number of sites with completed stormwater facility maintenance.		
10. Number of sites that municipality performed maintenance & billed landowner.		

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Pollution Prevention

Measurable Goals	2019	2020
1. Number of municipally operated structural stormwater facilities.		
2. Number of new municipally operated stormwater facilities installed.		
3. Number of municipally operated stormwater facilities inspected.		
4. Of municipal facilities inspected, number requiring maintenance.		
5. Number of municipal properties required to have a SWPPP.		
6. Number of inspections of municipal properties with a SWPPP.		
7. Frequency of street sweeping completed (March 29 to November 25).		
8. Tons of street sweeping waste collected.		
9. Number of catch basin sumps cleaned (March 29 to November 25).		
10. Tons of catch basin waste collected.		

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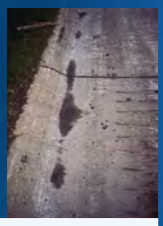
Pollution Prevention

Measurable Goals	2019	2020
11. If collection is offered, frequency of curbside leaf collection.		
12. Number of lane-miles for snow and ice control.		
13. Tons of salt applied (October to March).		
14. Tons of sand applied (October to March).		
15. Tons of salt / sand mix applied (October to March).		
16. Gallons of brine applied (October to March).		
17. Gallons of chem-melt applied (October to March).		
18. Gallons of beet juice applied (October to March).		
19. Gallons of pre-wetting compound applied (October to March).	N/A	
20. Number of municipal employees trained during reporting year.		

15

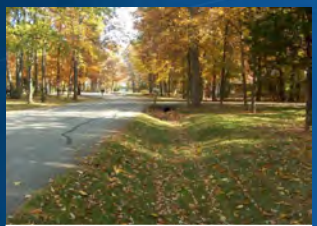
Best Management Practices

Street Sweeping


Proprietary Devices

Stream Stabilization

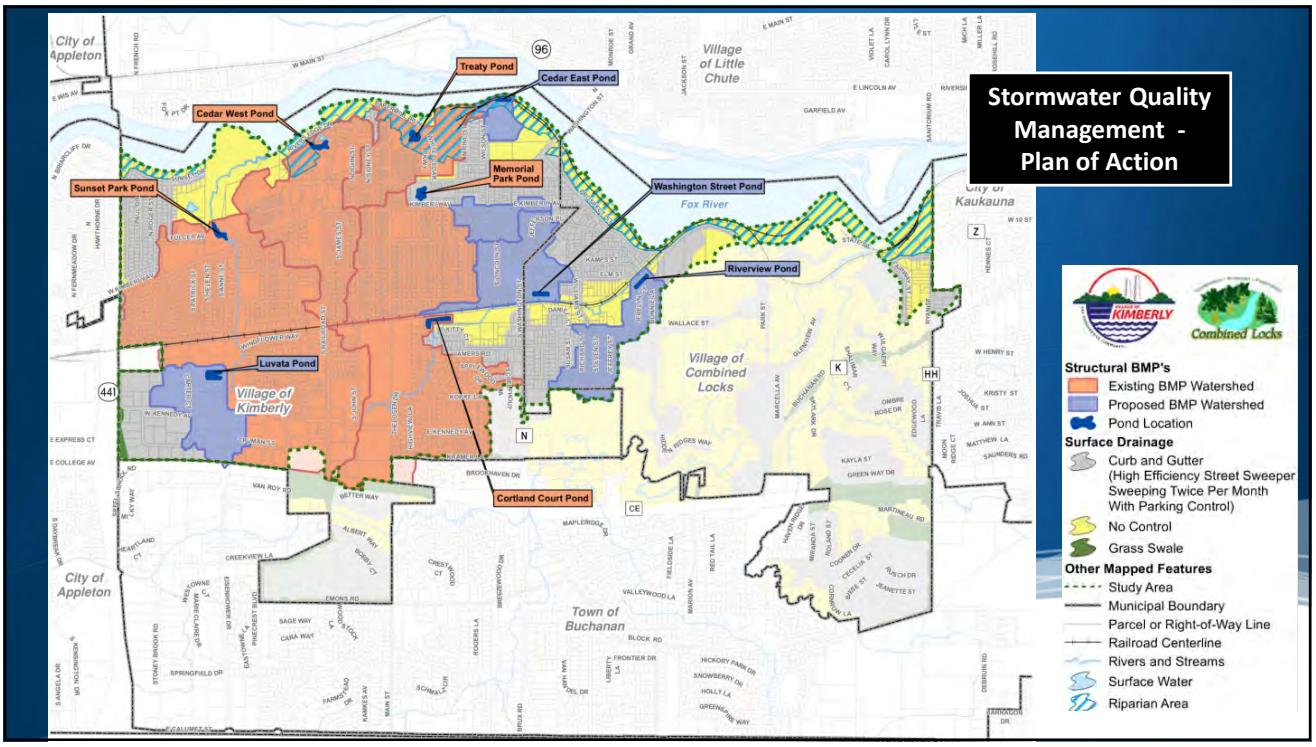


Grass Swales / Filters

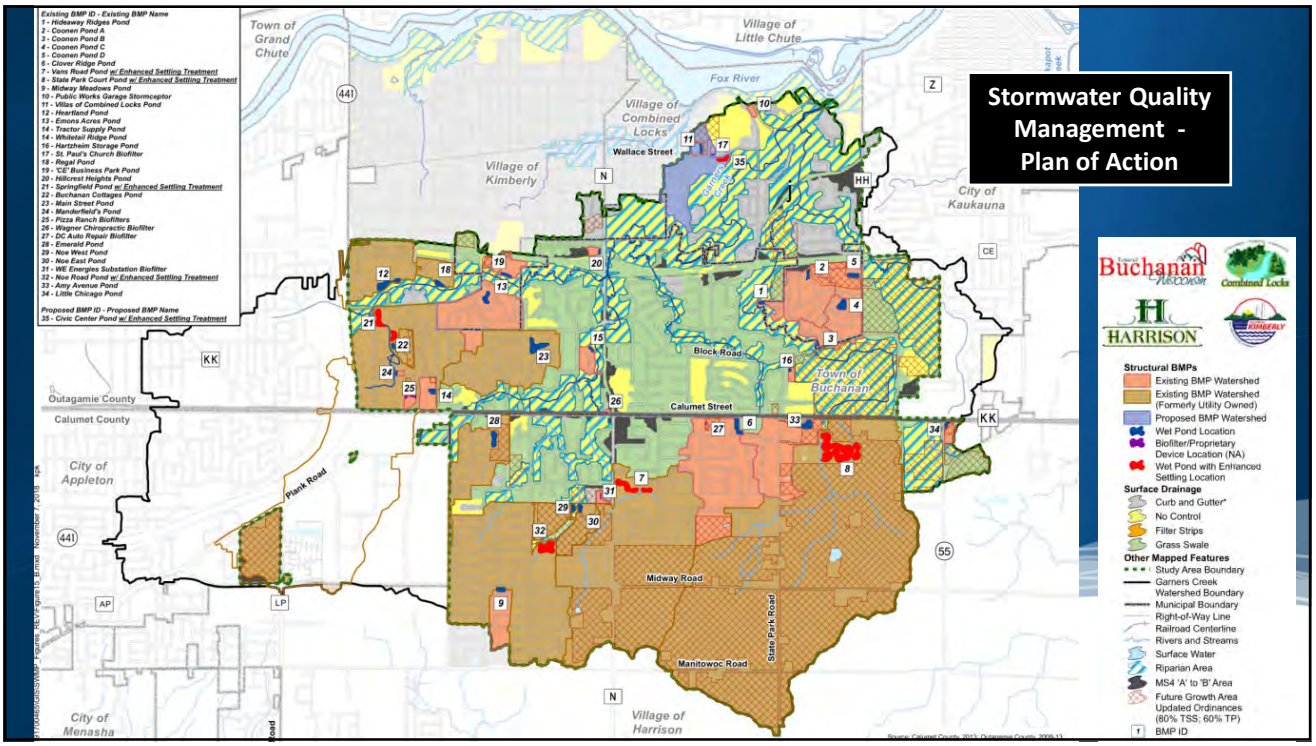
Biofilters / Rain Gardens

Wetlands / Wet Ponds

16


Stormwater Quality Management - Plan of Action
Treaty Pond
Cedar East Pond
Cedar West Pond
Memorial Park Pond
Sunset Park Pond
Washington Street Pond
Riverview Pond
Luvata Pond
Cortland Court Pond
Village of Little Chute
Village of Combined Locks
Village of Kimberly
City of Appleton
Town of Buchanan
City of Kaukauna
Fox River
Structural BMP's
Existing BMP Watershed
Proposed BMP Watershed
Pond Location
Surface Drainage
Curb and Gutter (High Efficiency Street Sweeper Sweeping Twice Per Month With Parking Control)
No Control
Grass Swale
Other Mapped Features
Study Area
Municipal Boundary
Parcel or Right-of-Way Line
Railroad Centerline
Rivers and Streams
Surface Water
Riparian Area

17


Stormwater Quality Management - Plan of Action
Existing BMP ID - Existing BMP Name
1 - Hideaway Ridges Pond
2 - Coonen Pond A
3 - Coonen Pond B
4 - Coonen Pond C
5 - Coonen Pond D
6 - Clover Ridge Pond
7 - Vans Road Pond w/ Enhanced Settling Treatment
8 - State Park Court Pond w/ Enhanced Settling Treatment
9 - Midway Meadows Pond
10 - Public Works Garage Stormceptor
11 - Villas of Combined Locks Pond
12 - Heartland Pond
13 - Emons Acres Pond
14 - Tractor Supply Pond
15 - Whitetail Ridge Pond
16 - Hartzheim Storage Pond
17 - St. Paul's Church Biofilter
18 - Regal Pond
19 - 'CE' Business Park Pond
20 - Hillcrest Heights Pond
21 - Springfield Pond w/ Enhanced Settling Treatment
22 - Buchanan Cottages Pond
23 - Main Street Pond
24 - Manderfield's Pond
25 - Pizza Ranch Biofilters
26 - Wagner Chiropractic Biofilter
27 - DC Auto Repair Biofilter
28 - Emerald Pond
29 - Noe West Pond
30 - Noe East Pond
31 - WE Energies Substation Biofilter
32 - Noe Road Pond w/ Enhanced Settling Treatment
33 - Amy Avenue Pond
34 - Little Chicago Pond
Proposed BMP ID - Proposed BMP Name
35 - Civic Center Pond w/ Enhanced Settling Treatment
Town of Grand Chute
Village of Little Chute
Fox River
Village of Combined Locks
Village of Kimberly
City of Kaukauna
Wallace Street
Block Road
Calumet Street
Midway Road
Manitowoc Road
State Park Road
Plank Road
Outagamie County
Calumet County
City of Appleton
Town of Buchanan
City of Menasha
Village of Harrison
Structural BMPs
Existing BMP Watershed
Existing BMP Watershed (Formerly Utility Owned)
Proposed BMP Watershed
Wet Pond Location
Biofilter/Proprietary Device Location (NA)
Wet Pond with Enhanced Settling Location
Surface Drainage
Curb and Gutter*
No Control
Filter Strips
Grass Swale
Other Mapped Features
Study Area Boundary
Garners Creek Watershed Boundary
Municipal Boundary
Right-of-Way Line
Railroad Centerline
Rivers and Streams
Surface Water
Riparian Area
MS4 'A' to 'B' Area
Future Growth Area Updated Ordinances (80% TSS; 60% TP)
BMP ID

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Thank You for inviting us to present today!
Questions?
THE McMAHON Way
• FOR OVER 100 YEARS •
Values. Culture. Relationships

19

APPENDIX E

Illicit Discharge Detection & Elimination

Village of Combined Locks
405 Wallace Street
Combined Locks, WI 54113
Phone: 920.788.7740

INFORMATION SUBMITTED BY THE PUBLIC

Complaint Submitted By:		
Name:	☐ Anonymous	Date:
Address:		
Telephone:	E-Mail:	
Should we contact you? ☐ Yes ☐ No		
Location of Complaint:		
Site Name (Project):		Construction Site ID No:
Address / Location:		
Landowner Name:		

Description of Complaint: (check all that apply)

☐ Automobiles (fluid leak, car washing)	☐ Storm Water Management (flooding, pond maintenance)
☐ Pet Waste	☐ Illicit Discharge (spill / hazardous material)
☐ Household Hazardous Waste (dumping)	☐ Illicit Discharge (improper waste disposal)
☐ Household Practices (garbage, recycling)	☐ Illicit Discharge (dry weather flow / discharge)
☐ Fertilizers & Pesticides	☐ Illicit Discharge (illegal plumbing connection)
☐ Leaves & Grass Clippings	☐ Illicit Discharge (failing lateral / septic system)
☐ Stream & Shoreline Management (erosion)	☐ Street Sweeping / Catch Basin Cleaning
☐ Residential (downspouts, sump pump)	☐ Municipal Road Salt & Other Deicers
☐ Construction Site Erosion Control	☐ Other: _____

Describe complaint:

Description of Follow-Up Actions:

Describe follow-up actions:

FEE SCHEDULE

For The

ILLICIT DISCHARGE DETECTION & ELIMINATION PROGRAM
VILLAGE OF COMBINED LOCKS, WISCONSIN

Effective Date: May 1, 2006

Forfeitures / Fines:

Forfeitures / fines for the illicit discharge detection and elimination program vary from a minimum of **$25** to a maximum of **$500** for each day of non-compliance and each occurance. Issuance of a forfeiture / fine will depend on if the violator is non-responsive or if the violation is blatant, intentional, repetitive or severe. The forfeitures / fines are as follows:

Notice of Violation	Home Owner	Other
Failure to properly dispose of a pollutant or illicit discharge	**$50**	**$500**
Failure to take reasonable actions to eliminate an illicit discharge	**$50**	**$500**
Failure to take reasonable actions to locate an undocumented drain	**$30**	**$300**
Failure to implement WPDES Industrial Discharge Permit	**n/a**	**$500**
Failure to allow reasonable access for inspecting or sampling	**$50**	**$500**
Failure to install, maintain or calibrate monitoring equipment	**n/a**	**$500**
Failure to install or maintain non-structural and structural BMPs	**n/a**	**$500**
Failure to notify Village of a spill or release of hazardous substance	**$25**	**$250**
Failure to take reasonable actions to prevent or contain a spill or release of a hazardous substance	**$50**	**$500**

Mandatory training workshops and/or community service projects (e.g. stream cleanup, highway cleanup, etc.) could also be used to encourage behavior change if a violation is blatant, intentional, non-responsive, repetitive, or severe.

Chapter 8

Illicit Discharge and Connection to Storm Water Utility

15-8-1	Purpose and Intent
15-8-2	Definitions
15-8-3	Applicability
15-8-4	Responsibility for Administration
15-8-5	Compatibility With Other Regulations
15-8-6	Severability
15-8-7	Ultimate Responsibility
15-8-8	Discharge Prohibitions
15-8-9	Watercourse Protection
15-8-10	Compliance Monitoring
15-8-11	Requirement to Prevent, Control, and Reduce Storm Water Pollutants by the Use of Best Management Practices
15-8-12	Notification of Spills
15-8-13	Violations; Enforcement; Penalties
15-8-14	Appeals
15-8-15	Enforcement Measures After Appeal
15-8-16	Cost of Abatement of the Violation
15-8-17	Violations Deemed a Public Nuisance
15-8-18	Remedies Not Exclusive
15-8-19	Adoption of Chapter
15-8-20	Limitation on Municipality Responsibility

Sec. 15-8-1 Purpose and Intent.

The purpose of this Chapter is to provide for the health, safety, environment and general welfare of the citizens of the Village of Combined Locks through the regulation of non-storm water discharges into waters of the state or the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This Chapter establishes methods for controlling the introduction of pollutants into waters of the state or the MS4 in order

to comply with requirements of the Wisconsin Pollutant Discharge Elimination System (WPDES) permit process. The objectives of this Chapter are:

(a) To regulate the contribution of pollutants into waters of the state or the MS4 by storm water discharges by any user.

(b) To prohibit illicit connections and discharges into waters of the State of Wisconsin or the MS4.

(c) To establish legal authority to carry out all inspection, surveillance, monitoring, and enforcement procedures necessary to ensure compliance with this Chapter.

Sec. 15-8-2 Definitions.

(a) **Definitions Established.** For the purposes of this Chapter, the following shall mean:

(1) ***Authorized Enforcement Agency.*** Employees or designees of the Director of Public Works of the municipal agency designated to enforce this Chapter.

(2) ***Best Management Practices (BMP's).*** Structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the State of Wisconsin.

(3) ***Construction Activity.*** Activities subject to Village of Combined Locks construction permits per erosion control and stormwater management ordinances or WPDES construction permits per NR 216, Wis. Adm. Code, and Chapter 283, Wis. Stats.

(4) ***Contaminated Storm Water.*** Storm water that comes into contact with material handling equipment or activities, raw materials, intermediate products, final products, waste materials, byproducts or industrial machinery in the source areas listed in NR 216, Wis. Adm. Code.

(5) ***Department (DNR).*** The Wisconsin Department of Natural Resources.

(6) ***Discharge.*** As defined in Chapter 283, Wis. Stats., when used without qualification includes a discharge of any pollutant.

(7) ***Discharge of Pollutant or Discharge of Pollutants.*** As defined in Chapter 282, Wis. Stats., means any addition of any pollutant to the waters of this state from any point source.

(8) ***Hazardous Materials.*** Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

(9) ***Illicit Discharge.*** Any discharge into waters of the state or a municipal separate storm sewer system that is not composed entirely of storm sewer. Non-storm water discharges that are not considered illicit discharges include water line flushing, landscape irrigation, diverted stream flows, uncontaminated groundwater infiltration,

uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, fire fighting, and discharges authorized under a WPDES permit unless identified by the Director of Public Works as a significant source of pollutants to waters of the state.

(10) ***Illicit Connections.*** An illicit connection is defined as either of the following:

a. Any drain or conveyance, whether on the surface or subsurface, that allows an illicit discharge to enter waters of the state or the MS4 including, but not limited to, any conveyances that allow any non-storm water discharge including sewage, process wastewater, and wash water to enter waters of the state or the MS4 and any connections to waters of the state or the MS4 from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency, or

b. Any drain or conveyance connected from a commercial or industrial land use to waters of the state or the MS4 which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

(11) ***Industrial Activity.*** Activities subject to WPDES Industrial Permits per NR 216, Wis. Adm. Code and Chapter 283, Wis. Stats.

(12) ***Maximum Extent Practicable (MEP).*** A level of implementing management practices in order to achieve a performance standard or other goal which takes into account the best available technology, cost-effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features.

(13) ***Municipality.*** Any city, town, village, county, county utility district, town sanitary district, town utility district, school district or metropolitan sewage district or any other public entity created pursuant to law and having authority to collect, treat or dispose of sewage, industrial wastes, storm water or other wastes.

(14) ***Municipal Separate Storm Sewer System (MS4).*** As defined in NR 216, Wis. Adm. Code, means a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, construction channels or storm drains, which meets all of the following criteria:

a. Owned or operated by a municipality.

b. Designed or used for collecting or conveying storm water.

c. Which is not a combined sewer conveying both sanitary and storm water.

d. Which is not part of a publicly-owned wastewater treatment works that provides secondary or more stringent treatment.

(15) ***Non-Storm Water Discharge.*** Any discharge to the MS4 that is not composed entirely of storm water.

(16) ***Owner.*** Any person holding fee title, an easement or other interest in property.

(17) ***Outfall.*** The point at which storm water is discharged to waters of the state or to a storm sewer.

(18) ***Person.*** An individual, owner, operator, corporation, partnership, association, municipality, interstate agency, state agency or federal agency.

(19) ***Pollutant.*** As defined in Ch. 283, Wis. Stats., means any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

(20) ***Pollution.*** As defined in Ch. 283, Wis. Stats., means any man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of water.

(21) ***Pollution Prevention.*** Taking measures to eliminate or reduce pollution.

(22) ***Premises.*** Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

(23) ***Storm Water.*** Runoff from precipitation including rain, snow, ice melt or similar water that moves on the land surface via sheet or channelized flow.

(24) ***Storm Water Management Plan/Storm Water Pollution Prevention Plan.*** A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to waters of the state or the MS4 to the maximum extent practicable.

(25) ***Wastewater.*** Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

(26) ***Watercourse.*** A natural or artificial channel through which water flows. These channels include: all blue and dashed blue lines on the USGS quadrangle maps, all channels shown on the soils maps in the NRCS soils book for Outagamie County, all channels identified on the site, and new channels that are created as part of a development. The term watercourse includes waters of the state as herein defined.

(27) ***Waters of the State.*** As defined in Ch. 283, Wis. Stats., means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and retained completely upon the property of a person.

(28) ***Wisconsin Pollutant Discharge Elimination System (WPDES) Storm Water Discharge Permit.*** A Wisconsin pollutant discharge elimination system permit issued pursuant to Chapter 283, Wis. Stats.

Sec. 15-8-3 Applicability.

This Chapter shall apply to all water and discharges entering waters of the state or the MS4 generated on any lands unless explicitly exempted by the Director of Public Works.

Sec. 15-8-4 Responsibility for Administration.

The Director of Public Works shall administer, implement, and enforce the provisions of this Chapter. Any powers granted or duties imposed upon the Director of Public Works may be delegated in writing by the Director of Public Works to persons or entities acting in the beneficial interest of or in the employ of the agency.

Sec. 15-8-5 Compatibility With Other Regulations.

This Chapter is not intended to modify or repeal any other ordinance, rule, regulation, or other provision of law. The requirements of this Chapter are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law, and where any provision of this Chapter imposes restrictions different from those imposed by any other ordinance, rule, regulation, or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control.

Sec. 15-8-6 Severability.

The provisions of this Chapter are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Chapter or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Chapter.

Sec. 15-8-7 Ultimate Responsibility.

The standards set forth herein and promulgated pursuant to this Chapter are minimum standards; therefore this Chapter does not intend or imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants.

Sec. 15-8-8 Discharge Prohibitions.

(a) **Prohibition of Illicit Discharges.** No person shall throw, dump, spill, drain, or otherwise discharge, cause, or allow others under its control to throw, dump, spill, drain, or otherwise discharge into waters of the state or the MS4 any pollutants or waters containing any pollutants, other than storm water.

(b) **Allowed Discharges.**

(1) Water line flushing, landscape irrigation, diverted stream flows, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from

potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, and discharges authorized under a WPDES permit unless identified by the Director of Public Works as a significant source of pollutants to waters of the state.

(2) Discharges or flow from firefighting, and other discharges specified in writing by the Director of Public Works as being necessary to protect public health and safety.

(3) Discharges associated with dye testing; however, this activity requires a verbal notification to the Director of Public Works and the Wisconsin Department of Natural Resources a minimum of one (1) business day prior to the time of the test.

(4) Any non-storm water discharges permitted under a construction activity permit, industrial activity permit, or WPDES permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Director of Public Works prior to allowing discharges to waters of the state or the MS4.

(c) **Prohibition of Illicit Connections.**

(1) The construction, use, maintenance or continued existence of illicit connections to waters of the state or the MS4 is prohibited.

(2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection are permissible under law or practices applicable or prevailing at the time of connection.

(3) A person is considered to be in violation of this Chapter if the person connects a line conveying sewage to waters of the state or the MS4, or allows such a connection to continue.

(4) Improper connections in violation of this Chapter must be disconnected and redirected, if necessary, to an approved on-site wastewater management system or the sanitary sewer system upon approval of the Director of Public Works.

(5) Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to waters of the state or the MS4, shall be located by the owner or occupant of that property upon receipt of written notice of violation from the Director of Public Works requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be determined, that the drain or conveyance be identified as storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the Director of Public Works.

Sec. 15-8-9 Watercourse Protection.

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of soil erosion, trash,

debris, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

Sec. 15-8-10 Compliance Monitoring.

(a) **Right of Entry; Inspecting and Sampling.** The Director of Public Works shall be permitted to enter and inspect properties and facilities subject to regulation under this Chapter as often as may be necessary to determine compliance with this Chapter:

(1) If a property or facility has security measures in force which require proper identification and clearance before entry into its premises, the owner or operator shall make the necessary arrangements to allow access to representatives of the Director of Public Works.

(2) Facility owners and operators shall allow the Director of Public Works ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records.

(3) The Director of Public Works shall have the right to set up on any property or facility such devices as are necessary, in the opinion of the Director of Public Works, to conduct monitoring and/or sampling of the facility's storm water discharge.

(4) The Director of Public Works has the right to require the owner or operator to install monitoring equipment as necessary, and make the monitoring data available to the Director of Public Works. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure storm water flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the property or facility to be inspected and/or sampled shall be promptly removed by the owner or operator at the written or oral request of the Director of Public Works and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator.

(6) Unreasonable delays in allowing the Director of Public Works access to a facility is a violation of this Chapter. A person who is the operator of a facility commits an offense if the person denies the Director of Public Works reasonable access to the facility for the purpose of conducting any activity authorized or required by this Chapter.

(b) **Special Inspection Warrant.** If the Director of Public Works has been refused access to any part of the premises from which storm water is discharged, and the Director of Public Works is able to demonstrate probable cause to believe that there may be a violation of this Chapter, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this Chapter or any order issued

hereunder, or to protect the overall public health, safety, environment and welfare of the community, then the Director of Public Works may seek issuance of a special inspection warrant per Section 66.0119, Wis. Stats.

Sec. 15-8-11 Requirement to Prevent, Control and Reduce Storm Water Pollutants by the Use of Best Management Practices.

The owner or operator of any activity, operation, or facility which may cause or contribute to pollution or contamination of storm water shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into waters of the state or the MS4 through the use of structural and non-structural BMP's. Further, any person responsible for a property or premise, that is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMP's to prevent the further discharge of pollutants to waters of the state or the MS4. Compliance with all terms and conditions of a valid permit authorizing the discharge of storm water associated with industrial activity or construction activity, to the maximum extent practicable, shall be deemed compliance with the provisions of this Section.

Sec. 15-8-12 Notification of Spills.

(a) Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illicit discharges or pollutants discharging into storm water, the MS4, or waters of the state, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release, so as to minimize the impacts of the discharge.

(b) In the event of such a release of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services, and shall also notify the Director of Public Works. In the event of a release of non-hazardous materials, said person shall notify the Director of Public Works in person or by telephone or facsimile no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the Director of Public Works within forty-eight (48) hours of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site record of the discharge and the actions taken to prevent it recurrence. Such records shall be retained for at least five (5) years.

(c) Failure to provide notification of a release as provided above is a violation of this Chapter.

Sec. 15-8-13 Violations; Enforcement; Penalties.

(a) **Violations.**

(1) ***Violations of Chapter.*** It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Chapter. Any person who has violated or continues to violate the provisions of this Chapter, may be subject to the enforcement actions outlined in this Section, or may be restrained by injunction or otherwise abated in a manner provided by law.

(2) ***Emergency Abatement.*** In the event the violation constitutes an immediate danger to public health or public safety, the Director of Public Works is authorized to enter upon the subject private property, without giving prior notice, to take any and all measures necessary to abate the violation. The Director of Public Works is authorized to seek costs of the abatement as outlined in Section 15-8-16.

(b) **Warning Notice.** When the Director of Public Works finds that any person has violated, or continues to violate, any provision of this Chapter, or any order issued hereunder, the Director of Public Works may serve upon that person a verbal or written Warning Notice, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. Investigation and/or resolution of the matter in response to the Warning Notice in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Warning Notice. Nothing in this Subsection shall limit the authority of the Director of Public Works to take action, including emergency action or any other enforcement action without first issuing a Warning Notice.

(c) **Notice of Violation.**

(1) ***Compliance Order.*** Whenever the Director of Public Works finds that a person has violated a prohibition or failed to meet a requirement of this Chapter, the Director of Public Works may order compliance by written notice of violation to the responsible person.

(2) ***Notice of Violation.*** The Notice of Violation shall contain:

a. The name and address of the alleged violator;

b. The address when available or a description of the building, structure or land upon which the violation is occurring, or has occurred;

c. A statement specifying the nature of the violation;

d. A description of the remedial measures necessary to restore compliance with this Chapter and a time schedule for the completion of such remedial action;

e. A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

f. A statement that the determination of violation may be appealed to the Director of Public Works by filing a written notice of appeal within three (3) business days of service of notice of violation; and

g. A statement specifying that, should the violator fail to restore compliance within the established time schedule, representatives of the Director of Public Works may issue a notice of intent to the responsible party of its intent to perform work necessary to comply with this Chapter. The Director of Public Works may go on the land and commence the work after issuing the notice of intent. The Director of Public Works is authorized to seek costs of the abatement as outlined in Section 15-8-16.

(3) ***Notice Requirements.*** Such notice may require without limitation:

a. The performance of monitoring, analyses, and reporting;
b. The elimination of illicit connections or discharges;
c. That violating discharges, practices, or operations shall cease and desist;
d. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
e. Payment of a fine to cover administrative and remediation costs; and
f. The implementation of BMP's.

(d) **Suspension of MS4 Access.**

(1) ***Emergency Cease and Desist Orders.***

a. When the Director of Public Works finds that any person has violated, or continues to violate, any provision of this Chapter, or any order issued hereunder, or that the person's past violations are likely to recur, and that the person's violation(s) has (have) caused or contributed to an actual or threatened discharge to the MS4 or waters of the state which reasonably appears to present an imminent or substantial endangerment to the health or welfare of persons or to the environment, the Director of Public Works may issue an order to the violator directing it immediately to cease and desist all such violations and directing the violator to:

1. Immediately comply with all ordinance requirements; and
2. Take such appropriate preventive action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge. Any person notified of an emergency order directed to it under this Subsection shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, the Director of Public Works may take such steps as deemed necessary to prevent or minimize harm to the MS4 or waters of the state, and/or endangerment to persons or to the environment, including immediate termination of a facility's water supply, sewer connection, or other municipal utility services. The Director of Public Works may allow the person to recommence its discharge when it has demonstrated to the satisfaction of the Director of Public Works that the period of endangerment has passed, unless

further termination proceedings are initiated against the discharger under this Chapter. A person that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the Director of Public Works within thirty (30) days of receipt of the prerequisite for, taking any other action against the violator.

(2) ***Suspension Due to Illicit Discharges in Emergency Situations.*** The Director of Public Works may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the state. If the violator fails to comply with a suspension order issued in an emergency, the Director of Public Works may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the state, or to minimize danger to persons.

(3) ***Suspension Due to the Detection of Illicit Discharge.***

a. Any person discharging to the MS4 in violation of this Chapter may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The Director of Public Works will notify a violator of the proposed termination of its MS4 access.

b. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the Director of Public Works.

(e) **Prosecution and Penalties.**

(1) ***Forfeitures.*** Any person violating any provision of this Chapter shall be subject to a forfeiture of not less than Twenty-Five Dollars ($25.00) nor more than Five Hundred Dollars ($500.00) and the costs of prosecution for each violation. Each day a violation exists shall constitute a separate offense.

(2) ***Injunction.*** Compliance with the provisions of this Chapter may also be enforced by injunction in any court with jurisdiction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctional proceedings.

Sec. 15-8-14 Appeals.

(a) **Board of Appeals Authority.**

(1) The Board of Appeals created pursuant to Section 2-4-2 of the Village of Combined Locks Code of Ordinances pursuant to Section 62.23(7)(e), Wis. Stats.:

a. Shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the Director of Public Works in administering this Chapter except for cease and desist orders obtained under Sec. 15-8-13(e);

b. Upon appeal, may authorize variances from the provisions of this Chapter which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of the Chapter will result in unnecessary hardship; and

c. Shall use rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances.

(2) This Section does not apply to determinations made regarding this Chapter in either municipal court or circuit court. In such circumstances, the appeals procedure shall be that set forth for appealing municipal court decisions and/or circuit court decisions as applicable.

(b) **Who May Appeal.** Appeals to the Board of Appeals may be taken by any aggrieved person or by any office, department, board or bureau of the Village of Combined Locks affected by any decision of the Director of Public Works.

Sec. 15-8-15 Enforcement Measures After Appeal.

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, the appropriate authority upheld the decision of the Director of Public Works, then representatives of the Director of Public Works may issue a notice of intent to the responsible party of its intent to perform work necessary to comply with this Chapter. The Director of Public Works may go on the land and commence the work after issuing the notice of intent. The Director of Public Works is authorized to seek costs of abatement as outlined in Section 15-8-16. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

Sec. 15-8-16 Cost of Abatement of the Violation.

The costs of the work performed by the Director of Public Works pursuant to this Chapter, plus interest at the rate authorized by the Director of Public Works shall be billed to the responsible party. In the event a responsible party fails to pay the amount due, the Clerk shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to Subch. VII of Chapter 66, Wis. Stats.

Sec. 15-8-17 Violations Deemed A Public Nuisance.

Any condition in violation of any of the provisions of this Chapter, and declared and deemed a nuisance, may be summarily abated or restored at the violator's expense.

Sec. 15-8-18 Remedies Not Exclusive.

(a) The remedies listed in this Chapter are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the Director of Public Works to seek cumulative remedies.

(b) The Director of Public Works may recover all attorney's fees, court costs and other expenses associated with enforcement of this Chapter, including sampling and monitoring expenses.

Sec. 15-8-19 Adoption of Chapter.

This Chapter shall be in force and effect from and after its adoption and publication. The above and foregoing Chapter was duly adopted by the Village Board of the Village of Combined Locks on the 18th day of December, 2007.

Sec. 15-8-20 Limitation on Municipality Responsibility.

Nothing in this Chapter creates or imposes, nor shall be construed to create or impose, any greater obligation or responsibility on the Village than those minimum requirements specifically required by the Wisconsin Statutes and Wisconsin Department of Natural Resources' regulations.

Technical Reference Guide

Illicit Discharge Detection & Elimination

PREPARED FOR THE
VILLAGE OF COMBINED LOCKS
OUTAGAMIE COUNTY, WISCONSIN

MARCH 1, 2021

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1. INTRODUCTION

The Village of Combined Locks has developed an illicit discharge detection and elimination program to remove illicit connections and discharges from the municipal separate storm sewer system (MS4). A thorough awareness of the MS4 system is important to the success of an illicit discharge program. Awareness allows the MS4 operator to locate problem areas, find the source, and eliminate the discharge.

Potential sources of illicit discharge include illegal business discharges, boat and marina discharges, overflows from sanitary sewer systems, illegal plumbing connections, illegal dumping of waste materials, and spills associated with roadway accidents and industrial activity. Illicit discharges can contribute high levels of pollutants, toxins, oil, grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from illicit discharges are concentrated and may be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

Discharges or flows that are NOT considered illicit discharges include water line flushing, landscape irrigation, diverted stream flows, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, firefighting, and discharges authorized under a WPDES permit unless identified by the Village as a significant source of pollutants to waters of the state.

The policies and procedures described herein have been developed to assist with implementation of the illicit discharge detection and elimination program. The policies and procedures include the following major components:

- On-Going Field Screening
- Routine Inspections
- Responding to Illicit Discharges
- Enforcement Actions
- Information Submitted by the Public

2. ON-GOING OUTFALL FIELD SCREENING

This section describes policies and procedures for conducting ongoing field screening of outfalls during dry weather periods. Table E-1 provides a basic overview of the field screening components. The Village's Public Works Director is responsible for coordinating the ongoing field screening.

The Village's WPDES Permit requires ongoing field screening is to be performed at 100% of major outfalls at least once during the permit term. In addition, the Village's WPDES Permit requires annual on-going field screening of minor outfalls is to be performed during the permit term. The Village plans to perform on-going field screening of outfalls as follows:

- Each major outfall is to be screened at least once every 5 years. A major outfall designated as potential, suspect, or obvious for illicit discharge within the prior 5 years is considered a "priority" major outfall. The Village plans to conduct field screening once a year for "priority" major outfalls. Major outfalls not designated as potential, suspect, or obvious for illicit discharge within the prior 5 years will be screened once every 5 years.

- Each minor outfall is to be screened once every 5 years. A minor outfall designated as potential, suspect, or obvious for illicit discharge within the prior 3 years is considered a "priority" minor outfall. The Village plans to conduct field screening once a year for "priority" minor outfalls. Minor outfalls not designated as potential, suspect, or obvious for illicit discharge within the prior 3 years will be screened once every 5 years.

Ongoing field screening is performed at outfalls identified on the Village's MS4 map and within the Village's developed urban area jurisdiction. The field screening crew should wait at least 48-hours following a rainfall event, to minimize the chance of runoff affecting field screening observations. The field crew may need to wait more than 48-hours if a detention pond is located upslope of an outfall. Some wet detention ponds will discharge runoff for 72 to 120-hours after a rainfall event. The best time of year for conducting field screening of outfalls is during dry seasons, when groundwater levels are low. Dry periods typically occur in June, July, August, September, and October, but dense vegetation will be present during these months. Dense vegetation can make finding outfalls difficult, so it may be preferred, though not required, that certain outfalls be field screened during 'leaf off' conditions. The most likely months that will meet these criteria are October, November, December, January, and February.

Basic equipment and supplies needed for the ongoing field screening are summarized in Table E-2. Necessary equipment and supplies include Outfall Field Screening Worksheets (electronic or hard copy), GPS unit, camera, stopwatch, tape measure, waders, and a copy of the MS4 map (electronic or hard copy). Field crews should also be equipped with basic safety equipment, including cellular phones, surgical gloves, and first aid kits. For safety reasons, the field crew should include two people. The field crew should have a basic understanding of illicit discharges and of these policies and procedures.

The field crew should review the MS4 map prior to conducting the outfall field screening. The MS4 map should identify outfalls, storm sewer and drainage system connectivity and WPDES permits. The WPDES permits identify those sites with permitted dry weather discharges and dewatering operations. Having an awareness of these dry weather discharges will be helpful during the field screening process. A plan for systematically screening the outfalls should be developed before beginning the screening process.

Typical outfall types that will be encountered include storm sewers, culverts and drainage ditches located along rivers, streams, lakes, and wetlands. Field screening points shall, where possible, be located downslope of any source of suspected illicit activity. Field screening points shall be located, where practicable, at the farthest manhole or other accessible location downslope in the system. Safety of personnel, accessibility of the location, and screening effectiveness shall be considered in making these determinations.

Outfall field screening activities are to be documented. An Outfall Field Screening Worksheet should be completed for each screened outfall. Refer to Figure E-1 for a sample hard copy worksheet. Paper copies of the worksheet can be used during field screening. An electronic version of this worksheet is preferred for ease of recordkeeping and compiling field data. The screening worksheet includes the following major sections:

Section 1 - Background Data

The first section of the worksheet is used to record basic data about the field screening, including date, time, field crew members, GPS coordinates, outfall ID, and current and past weather conditions. In addition to recording basic data, the field crew should also photograph and physically mark the outfall with an ID number. The photograph number or identifier should be recorded. GPS coordinates help field crews confirm outfall locations during future field screenings.

Section 2 - Outfall Description

This section is used to document basic characteristics of the outfall, including type, material, dimensions and whether there is flow present. If no flow is observed at the outfall, the crew can skip Sections 3 and 4 of the worksheet. If flow is observed, Sections 3 and 4 of the worksheet are used to characterize the flow.

Section 3 – Quantitative Characteristics for Flowing Outfalls

This section is used to record direct measurements of flowing outfalls. Commercially available probes and test strips can be used for measurement of temperature, pH, ammonia, and other parameters. When probes and test strips are used, measurements should be taken from a sample bottle that contains captured flow from the outfall. For some parameters, it may be necessary to send samples to a laboratory for analysis. All samples should be clearly labeled with the date, outfall ID, sample number, sample location, and Village name. As indicated in Table E-6, the following indicator parameters MUST be documented as part of the field analysis and sampling, in accordance with the Village's WPDES permit:

- Flow rate, pH, total chlorine, total copper, total phenol, and detergents; or
- Flow rate, detergent, ammonia, potassium, and fluoride.

Flow rate can be measured using one of two suggested methods. The first method records the time it takes to fill a container of known volume (i.e., 1-liter sample bottle). The second method measures velocity of flow and multiplies it by the estimated cross-sectional area of flow. The second method is preferred for large diameter pipes where containers are too small to effectively capture the flow.

To use the second method for measuring flow rate, the field crew measures and marks a fixed flow length, drops a lightweight item (i.e., leaf, ping pong ball, etc.) into the discharge, and records the time it takes the item to travel across the fixed length of flow. The velocity and flow rate are calculated as:

- Velocity (ft/sec) = Length of Flow (ft) / Time of Travel (sec)
- Flow Rate (cf/sec) = Cross Sectional Area (sf) x Velocity (ft/sec)

Section 4 – Physical Indicators for Flowing Outfalls

In this section, the field crew records sensory indicators associated with a flowing outfall. Sensory indicators are detected by smell or sight and do not require measurement equipment. The following sensory indicators MUST be documented, in accordance with the Village's WPDES permit:

- Odor, color, turbidity, floatables (oil sheen, surface scum, suds), and any other relevant cold-weather indicators regarding the potential presence of illicit discharges or dumping.

The observer uses the worksheet to indicate whether a sensory indicator is present, and if so, ranks the severity on a scale. Severity rankings for the five sensory indicators are summarized in Table E-3. **Odor** should be monitored directly from the outfall by the field crew. The crew should reach a consensus on whether odor is detected and the severity, since smell is a very subjective indicator.

Color and turbidity are best measured by collecting a sample in a clear bottle and holding it up to the light. A visual assessment of the discharge color and its intensity can often help identify industrial discharges. Turbidity, which is a measure of the cloudiness of the water, is also estimated visually. Color and turbidity are not the same indicator. Color is the tint or intensity of

the color observed, while turbidity is a measure of how easily light can penetrate through the sample.

The presence of **floatables** (oil sheen, surface scum, suds) is determined visually.

Ice can be used as a **cold-weather indicator** of illicit discharge when it forms in pipes, ditches and streams during the winter months, because most discharges are warm and can cause melting patterns at the outfall. Significant ice melting at an outfall or within a wet pond may indicate warm water from sewage or an industrial discharge. Groundwater or sump pump discharges may be warm enough to cause melting, so other indicators should be used in concert with ice melting observations. Other indicators to check for are discolored ice at the outfall and the formation of "rime ice", which forms when steam freezes. This crystalline formation is a good indicator of sewage or other hot discharges that would cause steam to form.

Section 5 – Physical Indicators for Both Flowing & Non-Flowing Outfalls

The purpose of this section is to document physical indicators found at both flowing and non-flowing outfalls that may reveal the impact of a past discharge. Physical indicators include outfall damage, outfall deposits or stains, abnormal vegetation growth, poor pool quality, and benthic (aquatic bottom dwelling organism) growth on pipe surfaces. These conditions can indicate that an intermittent or transitory discharge has occurred in the past, even though the pipe is not currently flowing.

Section 6 – Overall Outfall Designation

This section allows the field crew to designate the illicit discharge severity of the outfall based on the number and severity of discharge indicators identified in the previous sections of the worksheet. Using the descriptions provided in Table E-4, the illicit discharge is designated as unlikely, potential, suspect, or obvious.

Section 7 – Data Collection

In Section 7, the field crew records whether samples were collected for further analysis in a laboratory and whether the sample was taken from a pool downstream from the outfall or directly from the outfall. All samples should be clearly labeled with the date, outfall ID, sample number, sample location, and Village name. Indicate whether an intermittent flow trap was used to pool the discharge for sampling. If samples were collected for further analysis, the field crew should make arrangements for sending or delivering the samples to a laboratory the same day.

Section 8 – Any Non-Illicit Discharge Concerns

The last section of the worksheet is used to document any conditions at or near the outfall which require attention, including pipe failure, bank erosion, dumping, graffiti, or other maintenance or repair needs. Only items that are NOT related to illicit discharge should be recorded in this section.

The next step in the ongoing field screening of outfalls is to compile, organize and interpret data. The conditions observed and documented during field screening provide valuable information that can be used to determine the extent of illicit discharge problems in the MS4. It is important to compile and organize the data as soon as possible. Whether electronic or hard copy worksheets, a well-organized approach begins with effective management of the Outfall Field Screening Worksheets.

Major outfall designation data can be used to characterize the extent of illicit discharge problems in sub-watersheds and in the community. This characterization involves evaluation of the total number of outfalls designated as having potential, suspected or obvious illicit discharge potential. Based on this evaluation, the Village can assess whether illicit discharge problems are minimal, clustered in a specific area or areas, or severe. Characterizing the extent of illicit discharge problems will allow the Village to focus efforts on eliminating illicit discharges from the MS4.

All outfall screening is to be documented as part of the Village's illicit discharge program.

3. ROUTINE INSPECTIONS

In addition to the on-going field screening of outfalls, the Village plans to search for illicit discharges, illegal connections, and sanitary leakage by conducting routine plumbing, sanitary sewer, and storm sewer inspections. The Building Inspector is responsible for performing the routine plumbing inspections. The Public Works Director is responsible for performing the routine sanitary sewer and storm sewer inspections.

Table E-5 provides a basic overview of the routine inspections.

Routine Plumbing Inspections:

The Village conducts routine plumbing inspections when a building permit is issued, a building changes ownership, or a water meter or battery is changed. The Village inspects residential plumbing systems about once every 10 years. Commercial customers are inspected every few years by a trained cross-connection specialist. The purpose of the routine plumbing inspections is to locate illegal connections and cross-connections. Examples of illegal plumbing connections include a washing machine discharging to the building's sump pump, a garage floor drain directly connected to the building's storm lateral, a building's sanitary lateral cross-connected to the MS4, and lack of adequate cross-connection prevention devices.

Routine Sanitary Sewer Inspections:

The Village conducts routine inspections of its sanitary sewer system. Identifying infiltration and inflow (I & I) problems in the sanitary sewer system helps eliminate potential sanitary sewer leaks and overflows into the MS4 or waters of the state. The Village televises about 10% of its sanitary sewer system each year or about 100% every 10 years. Conditions that may be discovered include cross connections with storm sewers, collapsed or blocked pipes, offset joints, root intrusion, etc. As I & I problems and sanitary leaks are identified, an implementation plan will be developed to

remedy the problems. Each year, about 10% of the sanitary sewer manholes are cleaned and inspected. A report is maintained for each inspection.

Routine Storm Sewer Inspections:

The Village conducts routine storm sewer inspections before a street is reconstructed and when a storm sewer is cleaned. Typically, large diameter pipes are visually inspected and small diameter pipes are televised. Conditions that may be discovered include illicit discharges, cross connections with sanitary sewers, collapsed or blocked pipes, offset joints, root intrusion, etc. As problems are identified, an implementation plan will be developed to remedy the problems. A report is maintained for each inspection.

4. RESPONDING TO ILLICIT DISCHARGES

This section describes policies and procedures for responding to known or suspected illicit discharges. The Village Administrator, Public Works Director, Building Inspector, Fire Department and/or Village Engineer are responsible for coordinating the response to known or suspected illicit discharges and spills. The procedures include investigating the source of an illicit discharge or spill, responding to spills, preventing and containing spills, notifying the Department of Natural Resources (DNR) of spills that may discharge into waters of the state, eliminating sanitary leakage into the MS4, notifying the DNR of dye testing, and notifying adjacent municipalities of illicit discharges that may enter their MS4 system.

There are two primary ways an illicit discharge or spill can be discovered:

- Illicit discharge discovered during field screening of outfalls and routine inspections; or
- Third party reporting. Third party reporting includes reports to the Village of a known or suspected illicit discharge or spill by the general public. This also includes known or suspected illicit discharges or spills discovered by municipal staff as part of their everyday operating procedures (not related to ongoing or on-going field screening of outfalls).

During field screening of outfalls, chemical test results are compared to recommended benchmark levels provided by the Wisconsin DNR. The recommended benchmark levels, along with potential illicit and non-illicit sources, are summarized in Table E-6. If chemical test results exceed action levels or at least two physical indicators are noted, the Public Works Director is notified. The Public Works Director then instructs field crews whether to further investigate to attempt to locate a source of the illicit discharge.

The Village must respond as soon as possible. Once the source of an illicit discharge or spill is identified, the offending discharger will be contacted and directed to correct the problem. Refer to Section 4, “Enforcement Actions”. If an illicit connection cannot be eliminated in 30 days, the Village must contact the DNR to discuss appropriate action and timeframe for removal.

Investigating the Source of an Illicit Discharge or Spill:

Once an illicit discharge is found, a combination of methods is used to isolate its specific source. This section describes the following investigative methods: Drainage System Investigation, Drainage Area Investigation, and On-Site Investigation.

- *Drainage System Investigation:*

  This method involves progressive inspection and sampling along storm sewers and drainage ditches. The purpose of the investigation is to narrow the discharge to an isolated pipe or ditch segment within the drainage system. The simplest method is to start at the outfall and move up the system, inspecting storm sewer manholes and culverts along the way. The field crew should progressively move through the system until indicators reveal that the discharge is no longer present. As shown in Figure E-2, the goal is to isolate the discharge between two storm manholes or two culverts.

  Drainage system investigations include both visual observations and indicator sampling. Visual observations made during manhole and culvert inspections include presence of flow, odor, color, turbidity, floatables, and deposits or staining. Deposits or staining may be indicators of an intermittent discharge. If dry weather flow is observed, the field crew should collect a sample, and then analyze the sample in the field using commercially available test strips and kits. Indicator parameters that are required in the Village's WPDES permit, and other recommended parameters are summarized in Table E-7.

  Field crews must follow established safety and operational procedures when conducting manhole and culvert inspections. Established safety and operational procedures may include, but are not limited to properly diverting traffic, wearing safety vest/apparel, following proper procedures for removing manhole covers, using a gas monitor, and following proper procedures for confined space entry (if necessary).

  All drainage system inspections should be documented as part of the Village's illicit discharge detection and elimination program.

- *Drainage Area Investigation:*

  A basic visual survey or analysis of the drainage area for the problem outfall can be useful when investigating the source of an illicit discharge or spill. The field crew can simply walk or drive around the drainage area trying to identify a potential discharger or generating site. Drainage area investigations are most useful in tracing discharges from commercial or industrial sources. This method is not particularly useful in tracing sewage discharges. The field crew should use drainage area investigations in concert with visual observations and indicator sampling at manholes. For example, if the crew observes a thick, sudsy, fragrant discharge (consistent with wash water) at the outfall, they should check the drainage area for a laundromat. Other analytical tools include searching portions of the drainage area with high population density, high traffic density, older infrastructure age, and historic problems.

All drainage area investigations should be documented as part of the Village's illicit discharge detection and elimination program.

- *On-Site Investigation:*

  On-site investigations are used to pinpoint the exact source or connection producing a discharge within the MS4. The basic approaches to on-site investigations are dye testing, smoke testing and televising. Depending on conditions, the field crew may use one or more of these approaches. These approaches are most effective in locating direct discharges to the storm sewer and are not very effective at locating indirect discharges. The field crew must take appropriate steps related to safety and proper notification prior to conducting dye testing, smoke testing and televising. Table E-8 summarizes the three basic approaches.

  All on-site investigations should be documented as part of the Village's illicit discharge detection and elimination program.

<u>Responding to Spills:</u>

In the case of a spill being reported to the Village by the general public or by its own municipal staff, the person receiving the report should take in as much information as possible from the person reporting the spill. This information will be helpful in establishing the severity of the incident and how to respond. At a minimum, the following information should be requested:

- Date and time of spill
- Location of spill (street address, municipality)
- Property owner's (or responsible party's) name and address
- Type and amount of substance (known or suspected)
- Actions taken to stop or contain spill (if any)

The first priority is to determine if there is any fire, explosion, safety hazard to life and health, or a need to evacuate the building or area. All reports of spills should be referred immediately to the Fire Department, either via the direct line or the 911 Emergency System. For spills involving a petroleum sheen or highly suspicious material, the 911 Emergency System should be contacted immediately. Contact information for all parties that may be involved in responding to and / or cleanup of a reported spill is provided in Table E-9.

Some spills must be immediately reported to the DNR. Attachment E-1 includes a condensed version of Wisconsin's spill reporting requirements. All discharges of hazardous substances that adversely impact, or threaten to adversely impact public health, welfare or the environment must be immediately reported to the DNR. Attachment E-1 also describes the DNR's response procedures for reported spills. In the case of a reportable spill, the Primary Contact must notify the DNR's 24-hour toll free spill hotline at 1-800-943-0003.

After making the necessary contacts and notifications, the next steps in responding to a spill are containment, tracking the source, cleanup, and evidence collection. Depending on the severity of the spill, containment and cleanup efforts will be conducted by one or more of the following:

Public Works Director, Fire and Police Department, Hazmat Team, Coast Guard, and adjacent municipalities. Evidence collected during cleanup may include eyewitness accounts, photographs, samples, and other information specific to the incident. Tracking the source of the spill should be done using the same methods summarized above ("Investigating the Source of an Illicit Discharge or Spill").

The Village plans to document spill response efforts, including observations, parties involved in spill response, conversations, witness statements, decisions, actions, sampling activity, and photographs. Each photograph should include written documentation including date and time photo was taken, location, and photographer's name, title, and phone number.

Preventing and Containing Spills:

Public education and outreach is an effective measure for preventing and containing spills. There is a strong likelihood that many spills will not be reported to the Village. As such, outreach to municipal employees, businesses, property owners and the general public regarding ways to prevent and contain spills is an important component of the illicit discharge program. A targeted public education and outreach program is recommended for three sectors of the community:

- *Residential Neighborhoods* – Educate residential homeowners about the local Clean Sweep Program. If automobile fluids and other hazardous materials are properly disposed of during the Clean Sweep Program, the fluids can not be accidentally spilled or intentionally dumped into a storm drain. Storm drain stenciling may also be an effective educational tool.

- *Businesses / Generating Sites* **–** Educate business owners and generating sites about spill prevention and containment. Table E-10 lists common generating sites and types of activities that may result in illicit discharges and spills. Certain businesses have a higher potential for spills due to the type of materials and activities at the site. Useful outreach materials may include educational brochures, posters, and generic spill response plans which can be used by business owners and operators. The generic spill response plan should contain a list of local phone numbers for reporting spills, a list of best management practices for preventing spills, and a list of procedures for containing spills.

- *Municipal Housekeeping* – Educate Village employees about spill prevention and containment. Spills may occur during routine municipal operations, such as sanitary sewer maintenance, municipal vehicle maintenance, and household hazardous waste collection. It is important that Village employees are properly trained in spill response, particularly the fire department and local hazmat team. Also, the Village should work with the WDOT and County Highway Department to ensure that there is a spill response plan in place for local highways and streets. Roadways have a higher potential for spills due to accidents.

In addition to the public education and outreach program, the following practices and procedures are recommended to contain spills that occur within the Village:

- If a spill occurs, immediately plug or block surface inlets and ditches to contain the spill.

- If a spill occurs, immediately plug or block pond outlet structures to contain the spill.
- If a spill occurs, immediately plug or block underground storm sewer pipes using caulk dams and expandable plugs to contain the spill prior to discharge into waters of the state.
- Maintain an adequate supply of adsorbent spill cleanup materials at all times.

Notifying the DNR of Spills That May Discharge Into Waters of the State:

In the event that the Village identifies a spill or release of a hazardous substance, which has resulted or may result in the discharge of pollutants into waters of the state, the Village must immediately notify the DNR via the 24-hour toll free spill hotline (800-943-0003).

Eliminating Sanitary Leakage into the MS4:

Leakage from the sanitary sewer system into the MS4 will most likely be discovered during field screening of outfalls and routine sanitary sewer inspections. The Village will, to the maximum extent practicable, eliminate sanitary leakage into the MS4. Elimination of sanitary leakage will be accomplished by physically removing the connection. All repairs undertaken to eliminate sanitary leakage into the MS4 will be documented as part of the Village's illicit discharge detection and elimination program.

Notifying the DNR of Dye Testing:

The Village may conduct dye testing as an investigative method for tracking the source of a known or suspected illicit discharge. The Village must provide the Department of Natural Resources with advance notice of the time and location of dye testing within a MS4. The Village should notify the DNR a minimum of 1 business day prior to conducting dye testing. Verbal notification can be made either via the DNR's 24-hour spill hotline (1-800-943-0003) or to the DNR's Northeast Region Spills Coordinator.

Notifying Adjacent Municipalities of Illicit Discharges That May Enter Their MS4 System:

In the case of an illicit discharge that originates from the Village's MS4 and that discharges directly into an MS4 or property under the jurisdiction of an adjacent municipality, the Village must notify the affected municipality within 1 business day. Contact information for each of the Village's neighboring municipalities is provided in Table E-9. The Village should document each illicit discharge notification to an adjacent municipality.

5. ENFORCEMENT ACTIONS

Once the Village's Public Works Director can trace an illicit discharge or illegal connection to a source which is identified as a specific residence or commercial / industrial establishment, the property owner is identified as being non-compliant with the Village's Illicit Discharge and Connection to Storm Sewers Ordinance. When a non-compliance issue is identified, the inspector should first attempt to call or speak with the responsible party. For a minor non-compliance issue, the inspector will provide a written "Warning Notice" including deadline for correcting the non-compliance. The inspector will also distribute educational materials, if deemed appropriate. The

majority of non-compliance issues will likely be corrected in this manner. If the deadline is not met, the inspector will send via US Mail a written "Notice of Violation" to the responsible party. The "Notice of Violation" will outline the required actions to be completed by a specific date and time in order to avoid enforcement action.

Enforcement actions will depend on the type and severity of non-compliance. Typically, enforcement actions will include citations and forfeitures. Citations and forfeitures will continue until the inspector determines the site is compliant. Each day of non-compliance will be considered a new violation. For blatant, intentional, repetitive or severe non-compliance issues, the Public Works Director shall immediately initiate enforcement actions. Other potential enforcement actions include "Cease and Desist Orders", terminating storm sewer access, terminating water supply access, terminating sanitary sewer access, and issuing a "Notice of Intent" that the municipality intends to perform emergency work. Costs associated with emergency work will be billed to the responsible party or if not paid, placed on the tax roll as a special assessment.

If it takes more than 30 days to remove the illicit connection, the Village must contact the DNR to discuss appropriate action and the timeframe for removal.

All enforcement actions shall be documented as part of the Village's illicit discharge detection and elimination program. The Village should also document the number of illicit discharges and connections that are eliminated, and the total number of days that it took to eliminate the discharge/connection.

6. INFORMATION SUBMITTED BY THE PUBLIC

Information submitted by the general public or an adjacent municipality will be forwarded to the Village Clerk's Office for documentation and follow-up. Information might be submitted verbally, by phone, e-mail, letter or website.

Follow-up activities may consist of reviewing the MS4 map, requesting a copy of plumbing plans, performing field and lab tests, conducting site inspections, and / or initiating enforcement actions. All information received from the public and associated follow-up activities should be documented as part of the Village's illicit discharge detection and elimination program.

APPENDIX E

Tables, Figures & Attachments

TABLE E-1: ONGOING FIELD SCREENING STEPS

STEP	STRATEGIES
Step 1: Acquire necessary mapping, equipment and staff	▪ Use municipal separate storm sewer system (MS4) map. ▪ Refer to Table E-2 for field screening equipment list. ▪ For safety reasons, use a two-person field crew with proper training.
Step 2: Determine when to conduct field screening	▪ During dry season, if possible. Leaf-off conditions may be beneficial for accessing some outfalls. ▪ After a dry period of at least 48 hours. ▪ Low groundwater levels. ▪ In Wisconsin, this corresponds to the months of June through November, depending on actual conditions.
Step 3: Identify where to conduct field screening	▪ Outfalls located within the Village's MS4 jurisdiction and developed urban area. ▪ Screen outfalls systematically using MS4 map and after considering complaints, high risk areas, and results of previous outfall screening history.
Step 4: Conduct field screening	▪ Mark and photograph outfalls. Record GPS coordinate. ▪ Record outfall characteristics. Use "Outfall Field Screening Worksheet" or electronic form. ▪ Simple monitoring at flowing outfalls. ▪ Perform sampling at flowing outfalls. ▪ Deal with major problems immediately.
Step 5: Compile data from field screening	▪ Compile GPS data and photographs of outfalls. ▪ Enter data into database, or file paper copies of data in one location. ▪ Send any samples to laboratory for analysis, if necessary. ▪ Update MS4 map if necessary.
Step 6: Develop designation for outfalls	▪ Use compiled data to designate outfalls as having obvious, suspect, potential, or unlikely discharge potential.
Step 7: Characterize the extent of illicit discharge problems	▪ Use major outfall designation data. ▪ Characterize extent of illicit discharge problems as minimal, clustered or severe.
Step 8: Revise on-going monitoring strategy, as needed	▪ Use on-going field screening of outfalls and routine inspections of plumbing systems, septic systems, sanitary sewers, and storm sewers.

TABLE E-2: FIELD SCREENING EQUIPMENT & SUPPLY LIST

QUANTITY	ITEM
1	Backpack or Carrying Case
Enough for each item requiring batteries	Batteries (for flashlight, camera, GPS unit, etc)
1	Camera (preferably digital)
1 per person	Cellular Phones or Handheld Radios
1 per person	Clipboard and Pencil
1 per person	Photo ID Badge with (community) logo
1	Disposable Surgical Gloves, box
1	First Aid Kit
1	Flashlight or Head Lamp
1	GPS Unit
1	Labeling Tape, rolls
1	MS4 Map
1	List of MS4 Outfalls and WPDES Permits
1	Measuring Tape
1 per outfall	Outfall Field Screening Worksheets
Varies	Spray Paint, cans
1	Stop Watch or Watch with Second Hand
1	Temperature Probe
1 per person	Waders, pairs
1 per outfall	Wide Mouth Sample Bottles, 1-liter
OPTIONAL ITEMS [2]:	
See Footnote Below	Test Strips and Kits [3]

1. Quantities are per field crew.

2. If test strips and kits are not available to the field crew for analysis in the field, all samples collected during field screening must be taken to a testing laboratory.

3. Recommended test strips and kits: pH, total chlorine, total copper, alkalinity, ammonia, chloride, total hardness, nitrate-nitrite. Test strips should provide 'concentration range' for parameter being tested.

   *Field analysis parameters that are **required** by Permit include pH, total chlorine, total copper, total phenol and detergents OR use of detergent, ammonia, potassium, and fluoride as indicator parameters. Parameters that cannot be field analyzed with test strips should be analyzed in a laboratory.*

TABLE E-3: SENSORY INDICATOR SEVERITY RANKING

SENSORY INDICATOR	SEVERITY RANKING		
	1	2	3
Odor	Odor is faint or the crew cannot agree on its presence or origin.	Moderate odor within the pipe.	Odor is strong enough that crew can smell it a considerable distance from the outfall.
Color	Faint color detected in sample bottle.	Color is clearly detected in sample bottle.	Color is clearly detected in outfall flow.
Turbidity	A slight cloudiness is detected.	The sample is cloudy.	The sample is opaque, meaning that no light can pass through.
Floatables	Few floatables or slight sheen / suds / scum observed. Origin is not obvious.	Some floatables or moderate sheen / suds / scum observed. Some indication of origin.	Significant amount of floatables / sheen / suds / scum observed. Origin is clearly determined.
Cold Weather Indicators	Slight melting, discoloration or formation of “rime ice”.	Moderate melting, discoloration or formation of “rime ice”.	Significant melting, discoloration or formation of “rime ice”.

TABLE E-4: OUTFALL DESIGNATION DESCRIPTIONS

DESIGNATION	DESCRIPTION
Unlikely Discharge	Flowing outfalls with chemical indicators below benchmark levels; Flowing and non-flowing outfalls with fewer than two physical indicators.
Potential Discharge	Flowing outfalls with chemical indicators slightly above benchmark levels; Flowing and non-flowing outfalls with two or more physical indicators.
Suspect Discharge	Flowing outfalls with chemical indicators significantly above benchmark levels and/or high severity on one or more physical indicators.
Obvious Discharge	Outfalls where there is dumping or an illicit discharge that does not require sample collection for confirmation.

TABLE E-5: ON-GOING FIELD SCREENING & ROUTINE INSPECTIONS

TASK	DESCRIPTION	FREQUENCY
On-Going Field Screening of Outfalls	Includes all outfalls. Use same procedure used for initial field screening of major outfalls.	Priority Outfalls: Once Every Year Major Outfalls: Once Every 5 Years Minor Outfalls: Once Every 5 Years
Routine Plumbing Inspections	Visually inspect plumbing systems when a building permit is issued, a building changes ownership, or a water meter is changed.	Once every ± 10 Years
Routine Septic System Inspections	Require private septic system owners to hire a licensed septic company for an inspection as part of routine septic system maintenance and pumping.	Once Every ± 3 Years (if any)
Routine Sanitary Sewer Inspections	Visually inspect and/or televise sanitary sewers during wet weather to search for infiltration and inflow (I & I) sources and sanitary leakage.	± 10% of System Every Year -or- 100% of System Every ± 10 Years
Routine Storm Sewer Inspections	Visually inspect and/or televise storm sewers during dry weather to search for illicit discharges, cross connections, and structural problems.	Before an Urban Street Is Reconstructed or When a Storm Sewer Is Cleaned

TABLE E-6: CHEMICAL INDICATOR BENCHMARK LEVELS

PARAMETER	BENCHMARK LEVEL	ILLICIT SOURCES	NON-ILLICIT SOURCES
Ammonia	0.1 mg/l	Sanitary sewerage and industrial wastewater	Pets, wildlife and potentially WPDES permitted discharges
Detergents	0.5 mg/l	Industrial cleansers, commercial wash water and sanitary sewerage	Residential car washing
pH	Less than 6 or greater than 9	Industrial wastewater and concrete truck wash-out	Groundwater and WPDES permitted discharges
Total Chlorine	Detection or positive test unless associated with a WPDES permitted discharge at background water supply levels	Industrial wastewater, swimming pools and sanitary sewerage	WPDES permitted discharges
Total Copper	0.1 mg/l	Copper-based product use and manufacturing	WPDES permitted discharges
Phenol	Detection or positive test	Chemical, textile, paint, resin, tire, plastic, electronics and pharmaceutical manufacturing	None
Fluoride	Detection above background groundwater or water supply levels	Commercial and industrial wastewaters with a water supply component	Groundwater and WPDES permitted discharges
Potassium	10 mg/l	Sanitary sewerage and industrial wastewater	Groundwater and WPDES permitted discharges
E. coli	10,000 MPN/100 mL	Sanitary sewerage	Wildlife and pets
Human Bacteriodes	Detection or positive test	Sanitary sewerage	None

TABLE E-7: INDICATOR PARAMETERS

PARAMETER	DISCHARGE TYPE DETECTED				ANALYTIC METHOD
	SEWAGE	WASH WATER	TAP WATER	INDUSTRIAL OR COMMERCIAL LIQUID WASTES	
Ammonia	Good Indicator	Sometimes an Indicator	Poor Indicator	Sometimes an Indicator	Test Strip [2]
Boron	Sometimes an Indicator	Sometimes an Indicator	Poor Indicator	Unknown	Laboratory (Spectro-photometer)
Chlorine (Total) [1]	Poor Indicator	Poor Indicator	Poor Indicator	Sometimes an Indicator	Test Strip [2]
Color	Sometimes an Indicator	Sometimes an Indicator	Poor Indicator	Sometimes an Indicator	Visual
Conductivity	Sometimes an Indicator	Sometimes an Indicator	Poor Indicator	Sometimes an Indicator	Laboratory (Probe)
Copper (Total) [1]	Sometimes an Indicator	Sometimes an Indicator	Sometimes an Indicator	Sometimes an Indicator	Test Strip [2]
Detergents – Surfactants [1]	Good Indicator	Good Indicator	Poor Indicator	Sometimes an Indicator	Test Kit [2]
E.coli / Fecal coliform	Sometimes an Indicator	Poor Indicator	Poor Indicator	Poor Indicator	Laboratory
Fluoride [1]	Poor Indicator	Poor Indicator	Good Indicator	Sometimes an Indicator	Test Strip [2]
Hardness (Total)	Sometimes an Indicator	Sometimes an Indicator	Sometimes an Indicator	Sometimes an Indicator	Test Strip [2]
pH [1]	Poor Indicator	Sometimes an Indicator	Poor Indicator	Sometimes an Indicator	Test Strip [2]
Phenol (Total) [1]	Poor Indicator	Poor Indicator	Poor Indicator	Good Indicator	Test Kit [2]
Potassium [1]	Sometimes an Indicator	Poor Indicator	Poor Indicator	Good Indicator	Laboratory (Probe)
Turbidity	Sometimes an Indicator	Sometimes an Indicator	Poor Indicator	Sometimes an Indicator	Laboratory (Turbidity Meter)

1. Indicator parameters that are **required** by (community's) WPDES Permit include pH, total chlorine, total copper, total phenol and detergents OR use of detergent, ammonia, potassium, and fluoride as indicator parameters. Parameters that cannot be field analyzed with test strips should be analyzed in a laboratory.

2. Recommended test strips and test kits: pH, total chlorine, total copper, alkalinity, ammonia, chloride, detergents – surfactants, total hardness, nitrate-nitrite. Test strips should provide 'concentration range' for parameter being tested. Test strips are commercially available from sources such as NCL Labs and Hach. Other types of test kits include ampoule type kits (i.e. CHEMets, available from www.chemetrics.com).

TABLE E-8: ON-SITE INVESTIGATIVE TECHNIQUES

TECHNIQUE	DESCRIPTION	SAFETY / NOTIFICATIONS
Dye Testing	▪ Introducing non-toxic dye into toilets, sinks, shop drains and other plumbing fixtures. ▪ Discovery of dye in downstream storm sewer determines that illicit connection exists.	▪ Notify DNR at least 1 business day prior to dye testing. ▪ Carry a letter to document legal authority to gain access to the property (reference ordinance).
Smoke Testing	▪ Introducing non-toxic smoke into the storm sewer system and observe where smoke surfaces. ▪ Similar to smoke testing sanitary sewers to detect I & I. ▪ Most common situations that indicate illicit discharges include smoke seen rising from internal plumbing fixtures or from sanitary sewers.	▪ Notify the public prior to beginning smoke testing. A written notice should be sent out to residents. ▪ Notify local media if extensive smoke testing is planned. ▪ Notify local fire and police departments and local 911 call centers.
Televising	▪ Guiding a mobile video camera through a storm sewer pipe. ▪ Locates flows and leaks within pipe that may indicate illicit discharge. ▪ Useful for areas where access is constrained but will only detect discharges that are flowing at the time of televising.	▪ Carry a letter to document legal authority to gain access to the property, if necessary.

TABLE E-9: LOCAL CONTACTS

CONTACT	NAME	TITLE	PHONE #
Emergency	--	--	911
MS4 Operator	Ryan Swick	Director of Public Works	920-788-7740
Fire Department	Ken Wiedenbauer	Fire Chief	920-788-7740
Police Department	Tyler Van Handel	Sgt. Outagamie County Sheriff	920-832-5000
Public Works Department	Ryan Swick	Director of Public Works	920-788-7744
24-Hour Contact	Ryan Swick	Director of Public Works	920-788-7744
Village / City Hall	Racquel Shampo-Giese	Administrator	920-788-7740
DNR Spill Hotline	--	--	1-800-943-0003
DNR NE Region Spills Coordinator	Maizie Reif	Spills Coordinator	920-360-4291
County Emergency Management Director	Paula Rieder	Emergency Management Director	920-832-6361
Area Hazmat Team	Paula Rieder	Emergency Management Director	920-832-6361
Village of Kimberly	Allyn Dannhoff	Director of Operation	920-788-7507
Town of Buchanan	Maggie Mahoney	Administrator	920-734-8599
City of Kaukauna	John Sundelius	Director of Public Works	920-766-6305

TABLE E-10: GENERATING SITES & COMMON DISCHARGES

SITE	COMMON DISCHARGES
Vehicle Operations (maintenance, repair, fueling, washing, storage)	▪ Dumping fluids into storm drains ▪ Fuel spills, leaks and drips ▪ Wash-down of work areas ▪ Other spills
Outdoor Storage and Loading/Unloading	▪ Spills at loading/unloading areas ▪ Wash-down of loading/unloading areas ▪ Leaks and spills of stored liquids
Waste Management	▪ Leaks and spills of liquids ▪ Dumping fluids or debris into storm drains ▪ Leaking dumpsters
Physical Plants (building repair and maintenance, parking lot maintenance)	▪ Discharge from washing and steam cleaning ▪ Runoff from degreasing and re-surfacing
Turf & Landscaping	▪ Irrigation runoff ▪ Improper rinsing of fertilizer/pesticide applicators
Unique “Hotspots” (municipal or country club pools, golf courses, marinas, construction sites, restaurants, hobby farms)	▪ Discharge of chlorinated pool water ▪ Dumping of sewage and grease

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Figure E-1

OUTFALL FIELD SCREENING WORKSHEET

Section 1: Background Data

Sub-Watershed:		Outfall I.D.	
Today's Date:		Time (Military):	
Investigators:		Form Completed By:	
Temperature (°F):	Rainfall (inches): Last 24-Hours:		Last 48-Hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #'s:	

Land Use In Drainage Area (check all that apply):

☐ Industrial	☐ Open Space
☐ Urban - Urban Residential	☐ Institutional
☐ Suburban Residential	☐ Other:
☐ Commercial	☐ Known Industries:

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

Location	Material	Shape	Dimension (in.)	Submerged
☐ Closed Pipe	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:	☐ Circular ☐ Single ☐ Elliptical ☐ Double ☐ Box ☐ Triple ☐ Other: ☐ Other:	Diameter / Dimensions:	In Water: ☐ No ☐ Partially ☐ Fully
☐ Open Drainage	☐ Concrete ☐ Earthen ☐ Rip-Rap ☐ Other:	☐ Trapezoid ☐ Parabolic ☐ Other:	Depth: Top Width: Bottom Width:	With Sediment: ☐ No ☐ Partially ☐ Fully
☐ In-Stream	(applicable when collecting samples)			
Flow Present?	☐ Yes ☐ No *If No, skip to Section 5.*			
Flow Description (if present)	☐ Trickle ☐ Moderate ☐ Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
Parameter		**Result**	**Unit**	**Equipment**
☐ Flow #1	Volume		Liter	Bottle
	Time to Fill		Second	
☐ Flow #2	Flow Depth		Inches	Tape Measure
	Flow Width	' "	Feet / Inches	Tape Measure
	Measured Length	' "	Feet / Inches	Tape Measure
	Time Of Travel		S	Stop Watch
Temperature			°F	Thermometer
pH			pH Units	Test Strip / Probe
Ammonia			mg/l	Test Strip

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Figure E-1

OUTFALL FIELD SCREENING WORKSHEET

Section 4: Physical Indicators For Flowing Outfalls Only

Are any physical indicators present in the flow? ☐ Yes ☐ No (If No, Skip To Section 5)

Indicator	Check If Present	Description	Relative Severity Index (1-3)		
Odor	☐	☐ Sewage ☐ Rancid / Sour ☐ Petroleum / Gas ☐ Sulfide ☐ Other:	☐ 1 Faint	☐ 2 Easily Detected	☐ 3 Noticeable From A Distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 Faint Colors in Sample Bottle	☐ 2 Clearly Visible in Sample Bottle	☐ 3 Clearly Visible in Outfall Flow
Turbidity	☐	See Severity	☐ 1 Slight Cloudiness	☐ 2 Cloudy	☐ 3 Opaque
Floatables (Does Not Include Trash)	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Surface Scum ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 Few / Slight; origin not obvious	☐ 2 Some, indications of origin; (e.g., possible suds or oil sheen)	☐ 3 Some; origin clear (e.g., obvious oil sheen, suds or floating sanitary material
Cold Weather	☐	☐ Ice Melt ☐ Ice Discoloration ☐ "Rime Ice"	☐ 1 Slight	☐ 2 Moderate	☐ 3 Significant

Section 5: Physical Indicators For Both Flowing & Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No (If No, Skip To Section 6)

Indicator	Check If Present	Description	Comments
Outfall Damage	☐	☐ Spalling, Cracking Or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits / Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor Pool Quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe Benthic Growth	☐	☐ Brown ☐ Orange ☐ Green Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely	☐ Potential (presence of two or more indicators)	☐ Suspect (one or more indicators with a severity of 3)	☐ Obvious

Section 7: Data Collection

1. Sample For the Lab?	☐ Yes	☐ No
2. If Yes, Collected From:	☐ Flow	☐ Pool
3. Intermittent Flow Trap Set?	☐ Yes	☐ No

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs?)

☐ Yes	☐ No	Comments:

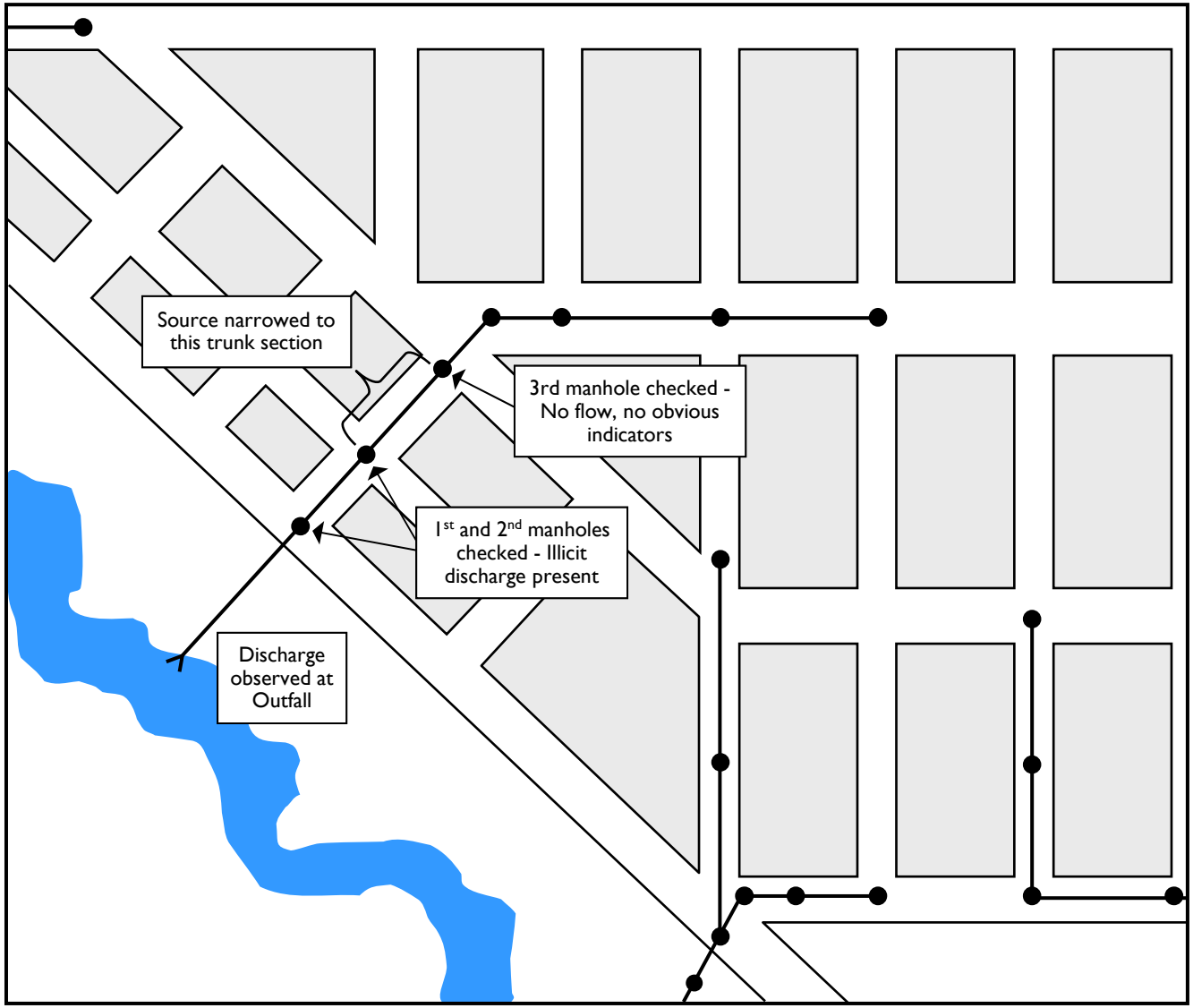

FIGURE E-2

EXAMPLE INVESTIGATION FOLLOWING THE SOURCE UP THE STORM SEWER SYSTEM

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Remediation and Redevelopment Program February 2021

DNR Staff Provide Spill Response and Support

Rarely does anyone ever plan a spill. Spills are typically caused by accidents of some sort, but when they do occur, the people involved with a spill must comply with state requirements. Wisconsin law mandates that spills of hazardous substances be immediately reported and cleaned up to protect Wisconsin's citizens and natural resources. When a spill occurs, the DNR has staff located in regional offices around the state to help in a variety of ways.

Responding to Spills

During Normal Working Hours
When calls are made to the DNR spill hotline during the day, the information comes directly to the DNR office in Madison and is forwarded to the Regional Spill Coordinator for follow-up.

After Hours
During the evening hours and on weekends, the phone calls are directed to the Wisconsin State Patrol, who will forward the information to a DNR duty officer. That duty officer will then alert the On-Call Spill Coordinator to the situation.

The DNR encourages the public to report hazardous substance spills using the 24-hour toll-free hotline: 1-800-943-0003

DNR Field Response

DNR Wardens and Regional Spill Coordinators
The first responders to a hazardous substance spill for the DNR may be a field warden or regional spill coordinator. Wardens are more likely to respond in remote areas since they are widely distributed across the state. Each county has at least one warden. Wardens know local responders, such as fire and police personnel, are familiar with the natural resources impacted by a spill and can assist the responsible party in managing the spill.

Spill coordinators (working in the DNR's Remediation and Redevelopment Program) are located in each of the regional DNR offices. These spill coordinators specialize in technical spill response issues and are available before, during, and after spills occur.

When a field warden or regional spill coordinator gets a call about a spill, their follow up may include additional phone calls to get more information about the nature of the spill, going to the site, and/or requesting other DNR assistance (e.g., fish managers, water resources staff and pubic information specialists).

When an emergency occurs and the responsible party is not available or willing to take action, the DNR will call in a zone contractor to respond to the spill. Zone contractors are emergency response companies that provide statewide emergency response services in such situations.

These companies normally provide a response within two hours of notification, and specialize in emergency response, spill containment and removal. They can assess a situation, take actions to prevent spilled materials from harming the public or the environment, sample substances to determine how to manage them, contain the spilled materials and remove those substances from the spill site to a secure facility until analyses are completed to determine their final placement. After the response, the department will seek cost recovery from the responsible party.

Publication Number: RR-559
dnr.wi.gov, search "spills"

Assistance Before a Spill

The spill coordinators are part of local planning and response networks. They work with local emergency planning agencies, talk to the local fire departments about spill response issues, and work with the wardens to ensure a consistent DNR approach to spill response. In addition, the spill coordinators work with local industries who may handle hazardous substances as part of their business to provide them with technical support for spill prevention as well as spill response.

Assistance After a Spill

When a spill occurs, field wardens and spill coordinators can provide assistance in a variety of ways. The DNR has developed spill packets that are provided to persons who are responsible for the release. Included in these packets is information on DNR regulations, additional DNR contacts, as well as listings of local contractors and waste management organizations that can assist the responsible party in management of the residual spilled material. The responsible party often consults with the spill coordinators for technical advice, since they are familiar with DNR regulations relating to spill containment and cleanup. Although smaller cleanups may not receive direct DNR oversight, the coordinators can answer questions and guide responsible parties through the process.

RR Program State Spill Response Team

The DNR manages spills through the RR Program's Spill Response Team. This team is comprised of a state spill coordinator, a state emergency management coordinator, a federal removals coordinator, the five regional spill coordinators and legal counsel. These staff meet regularly to identify and resolve spill response issues and help make spill response efforts in Wisconsin as effective as possible.

For more information, please see visit dnr.wi.gov and search "Spills."

Northeast Region Spill Coordinator
Maizie Reif 920-360-4291 (Green Bay)

Northern Region Spill Coordinator
Jeff Paddock 715-828-8544 (Rhinelander)

Southeast Region Spill Coordinator
Riley Neumann 414-750-7030 (Milwaukee)

South Central Region Spill Coordinator
Trevor Bannister 608-347-0058 (Fitchburg)

West Central Region Spill Coordinator
Jayson Schrank 715-410-8841 (Eau Claire)

State Spill & Federal Removals Coordinator
Issac Ross 414-750-7140 (Madison)

State Emergency Response Coordinator
David Woodbury 608-266-2598 (Madison)

Legal Counsel
Bill Nelson 608-267-7456 (Madison)

Wisconsin DNR - Hazardous Substance Spills

Remediation and Redevelopment Program **November 2016**

Immediate Reporting Required for Hazardous Substance Spills

If you are aware of a hazardous substance spill notify the Department of Natural Resources (DNR). State law requires the IMMEDIATE reporting of hazardous substance spills and other discharges to the environment.

CALL 800-943-0003 TO REPORT SPILLS

Use DNR Form 4400-225 to report other hazardous substance discharges

Other hazardous substance discharges, including historical contamination and contamination caused by an ongoing long-term release, discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples, should be reported to the DNR by filling out and submitting DNR Form 4400-225, "Notification for Hazardous Substance Discharge (Non-Emergency Only)," which is is available at dnr.wi.gov.

✓ **Report hazardous substance discharges as soon as visual or olfactory evidence confirms a discharge or laboratory data is available to document a discharge. Do not wait to complete a Phase II environmental assessment, or other similar report, to notify the DNR.**

Reporting is everyone's responsibility

Individuals and entities that cause a hazardous substance spill or discharge to the environment are required by state law to notify the DNR immediately - as soon as the spill or discharge is identified. Individuals and entities that own or control property where the spill or discharge occurred must report the discharge immediately if it is not reported by the person or entity that caused the discharge.

For public health and safety, the DNR encourages everyone to report known hazardous substance discharges. Reporting a spill or other discharge, in itself, does not make a person or entity liable for the contamination.

Proper spill containment, cleanup, and disposal is always required

Every person/entity (including lenders and local governments) that causes a hazardous substance discharge, or owns or controls property at which a discharge occurred, must comply with the response action requirements in Wis. Admin. Chs. NR 700 to 754. No spill or discharge is exempt from the duty to properly contain, clean up and dispose of the substance and associated contaminated media, such as soil, water and other affected materials.

Spill reporting exemptions

All spills must be cleaned up, but it is generally not necessary to report recent spills that are:

- less than 1 gallon of gasoline
- less than 5 gallons of any petroleum product other than gasoline
- any amount of gasoline or other petroleum product that is completely contained on an impervious surface
- individual discharges authorized by a permit or program approved under Wis. Stats. Chs. 289 - 299
- less than 25 gallons of liquid fertilizer
- less than 250 pounds of dry fertilizer
- pesticides that would cover less than 1 acre of land if applied according to label instructions
  - NOTE: Reporting is required if the ongoing, long-term release or application of a permitted pesticide, fertilizer or other substance accumulates to levels that exceed current health or safety standards.
- less than the federal reportable quantities listed in 40 C.F.R. §§ 117 or 302
  - NOTE: U.S. EPA (federal) spill reporting requirements are outlined on the internet at https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release.

Spill reporting exemptions do not apply (and reporting is required) when:

- the spilled substance has not evaporated or been cleaned up in accordance with Wis. Admin. chs. NR 700 - 754
- the spilled substance is a potential fire, explosion or safety hazard
- the spilled substance causes, or threatens to cause, chronic or acute human health concerns
  - NOTE: If you are unsure about potential human health effects, consult with local or state health officials.
- the spilled substance adversely impacts, or threatens to impact, the air, lands or waters of the state (as either a single discharge or when accumulated with past discharges) - even if the degree of the impact has not yet been thoroughly evaluated
  - NOTE: If the substance causes sheen on surface water, has entered or is on the verge of entering the waters of the state, DNR will consider the spilled substance a threat to impact, or to have adversely impacted, waters of the state and reporting is required.

Terms, definitions, statutes and rules

Hazardous substance —Any substance that can cause harm to human health and safety, or the environment, because of where it is spilled, the amount spilled, its toxicity or its concentration. Even common products such as milk, butter, pickle juice, corn, beer, etc., may be considered a hazardous substance if discharged to a sensitive area.

Discharge — Spilling, leaking, pumping, pouring, emitting, emptying, dumping, etc., to land, air or water.

Spill — A discharge that is typically a one-time event or occurrence, and usually inadvertent.

Wis. Stat. § 292.11(2) and Wis. Admin. § NR 706.05 — Require individuals and entities that possess or control a hazardous substance, or that cause the discharge of a hazardous substance to the environment, to notify the DNR immediately about the discharge.

Wis. Stat. § 292.99 — Authorizes penalties up to $5,000 for each violation of the notification requirement.

Consult Wis. Stat. Ch. 292 and Wis. Admin. §§ 700 – 754, and dnr.wi.gov for further information on hazardous substance spill and discharge reporting, investigation and cleanup.

DNR contact information

To report a discharge call 1-800-943-0003. For more information on the spills program, including contact information, visit dnr.wi.gov, search "Spills".

APPENDIX F

Construction Site Pollutant Control

Construction Site Erosion Control Permit

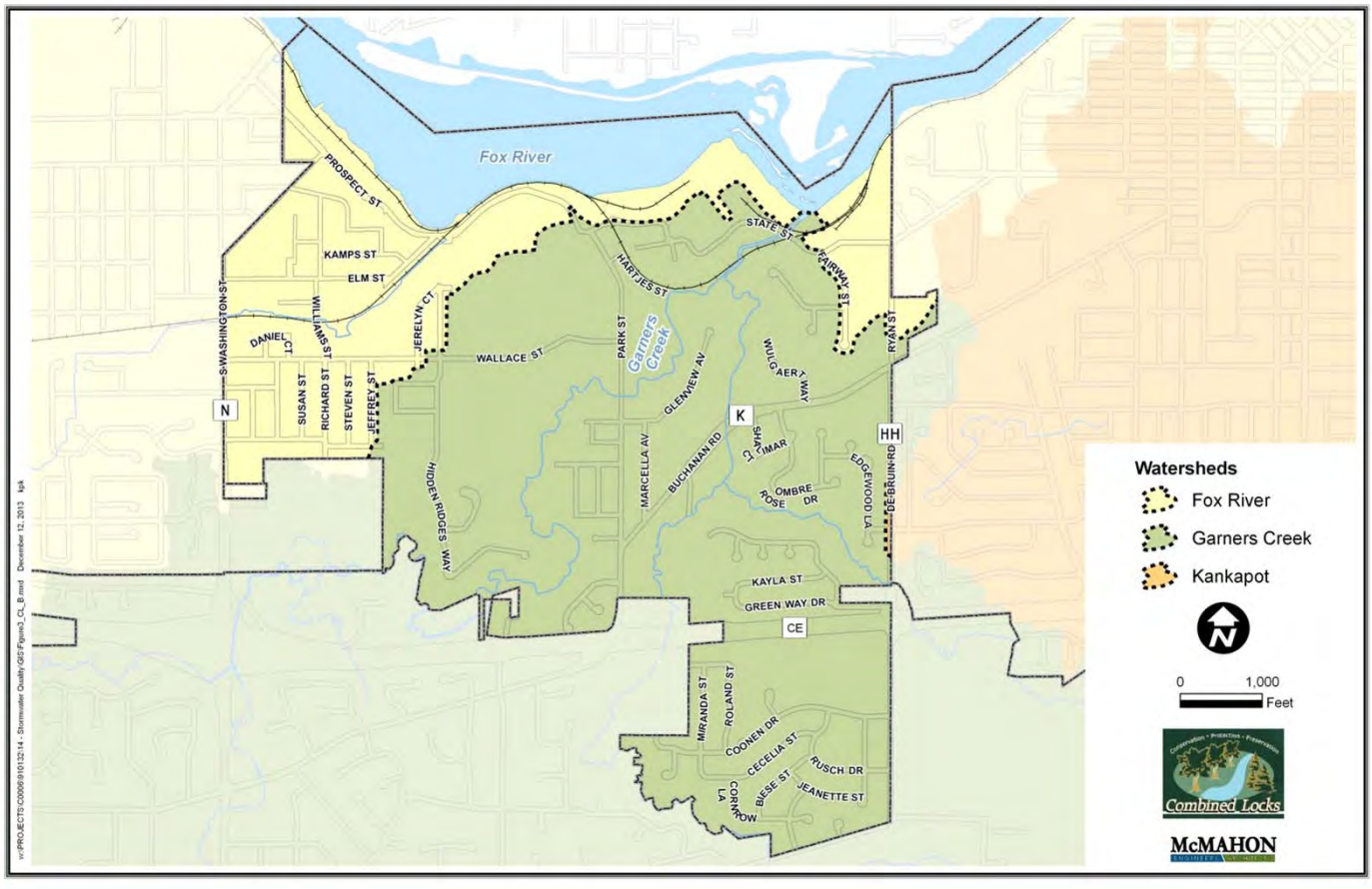
Protecting Our Lakes, Rivers & Streams

The Village of Combined Locks is required by the Wisconsin Department of Natural Resources to reduce the amount of stormwater pollutants discharging into the Fox River, Garners Creek and Kankapot Creek. Stormwater pollutants include sediment, phosphorus, bacteria, heavy metals, motor oil, toxins, solvents, pesticides, litter and other pollutants.

Decreasing the amount of sediment and phosphorus is anticipated to improve water clarity and reduce algae blooms in the Fox River, Garners Creek and Kankapot Creek. Reduced algae will increase the amount of oxygen available for fish and aquatic species survival. Also, greater water clarity and decreased algae will improve recreational opportunities and scenic beauty.

FOX RIVER: SEDIMENT & POOR WATER CLARITY

The Village's storm sewer system is a network of underground pipes and catch basins that carry stormwater pollutants directly to the Fox River, Garners Creek and Kankapot Creek. The below Watershed Map depicts the drainage divide for the Village's storm sewer system. As shown on the Watershed Map, the majority of the Village discharges to the Fox River and Garners Creek. The Village's Construction Site Erosion Control Ordinance requires the use of best management practices (BMPs) to reduce soil erosion and pollutant discharges from a construction site.



Frequently Asked Questions:

When is compliance required?

Ordinance compliance is required for all construction sites located within the Village.

Who is responsible for compliance?

Landowners, developers, builders, contractors, subcontractors, landscapers, utility companies and other persons involved with a construction site are responsible for ordinance compliance.

When is a Village permit required?

The Village's ordinance requires an erosion control permit for construction sites with 4,000 square feet or more of land disturbance. Although a permit is not typically required for construction sites with less than 4,000 square feet of land disturbance, ordinance compliance is still required.

What is required by the ordinance?

The Village's ordinance requires implementation and maintenance of best management practices (BMPs).

- **Non-Permitted Site** – Refer to the list of required BMPs for a non-permitted construction site.
- **Permitted Site** – In addition to the BMPs required for a non-permitted site, a written erosion and sediment control plan is required for a permitted site. If the site has 1 acre or more of land disturbance, the site also needs to comply with a maximum 5 ton per acre per year sediment performance standard.

BMPs Required for Non-Permitted Site

- Do not track soil onto streets by vehicles.
- Do protect storm inlets from sediment.
- Do protect adjacent streams, rivers, lakes and wetlands from sediment.
- Do protect storm sewers, culverts and ditches that carry runoff off the site.
- Do not discharge sediment during site dewatering activities.
- Do protect soil stockpiles that exist for more than 7 days from erosion.
- Do not discharge chemicals, cement and other building materials into storm sewers, ditches, streams, rivers, lakes and wetlands.

FOR ADDITIONAL INFORMATION:

Village of Combined Locks
300 Park Street
Combined Locks, WI 54113
PH 920.788.7744 FAX 920.788.7742
www.combinedlocks.org

FEE SCHEDULE

For The

CONSTRUCTION SITE POLLUTANT CONTROL PROGRAM
VILLAGE OF COMBINED LOCKS, WISCONSIN

Effective Date: May 1, 2006

Application Fee:

Permit application fees are as follows:

- Sites with less than 1 acre of disturbed area = **$200** (**fixed fee**).
- Sites with 1 acre or more of disturbed area = **$250** plus **$0.0002** / sq.ft. of disturbed area (**estimate**). The estimated fee encourages applicants to reduce the size of land disturbance. The estimated fee is paid when the permit application is initially submitted to the Village. The final fee includes the actual cost of design meetings, plan and financial guarantee reviews, permit issuance, and posting information on the website. The final application fee is typically paid in full before the permit is issued.

Inspection Fee:

Permit inspection fees are as follows:

- Sites with less than 1 acre of disturbed area = **$25** / week of land disturbance (**fixed fee**).
- Sites with 1 acre or more of disturbed area = **$250** plus **$25** / week of land disturbance (**estimate**). The estimated fee encourages permit applicants to reduce the duration of land disturbance. The estimated fee is paid before the permit is issued. The final fee includes the actual cost of pre-construction meetings, municipal site inspections, release of financial guarantee, and posting information on the website. The final fees are paid in full before the financial guarantee is released.

Forfeitures / Fines:

Forfeitures / fines vary from **$25** to **$500** for each day of non-compliance and each occurance. Issuance of forfeitures / fines will depend on if the violator is non-responsive or if the violation is blatant, intentional, repetitive or severe. The forfeitures / fines are as follows:

Notice of Violation	< 1 acre	≥ 1 acre
Failure to apply for and obtain an erosion control permit	**$50**	**$500**
Failure to develop & implement an erosion & sediment control plan	**$50**	**$500**
Failure to post the “Certificate of Permit Coverage” at the site	**$25**	**$250**
Failure to retain plans and inspection reports at the site	**$25**	**$250**
Failure to inspect and monitor erosion & sediment control BMPs	**$30**	**$300**
Failure to repair, replace or maintain erosion & sediment control BMPs	**$50**	**$500**
Failure to amend an erosion & sediment control plan, as needed	**$50**	**$500**
Failure to implement an amended erosion & sediment control plan	**$50**	**$500**

Village of Combined Locks
405 Wallace Street
Combined Locks, WI 54113
Phone: 920.788.7740

EROSION CONTROL AND STORMWATER MANAGEMENT PERMIT APPLICATION

Applicant Information

Applicant Name (Indiv., Org. or Entity)	Authorized Representative	Title	
Mailing Address	City	State	Postal Code
E-mail Address	Telephone (include area code)	Fax (include area code)	

Landowner Information (if different than Applicant)

Name (Organization or Entity)	Contact Person	Title	
Mailing Address	City	State	Postal Code
E-mail Address	Telephone (include area code)	Fax (include area code)	

Other Contact Information (check one): ☐ Engineer / Consultant ☐ Contractor / Builder ☐ Agent / Other

Name (Organization or Entity)	Contact Person	Telephone (include area code)	
Mailing Address	City	State	Postal Code

Project or Site Location

Site Name (Project):		Parcel Numbers:	
Address / Location:		Plat / CSM / Lot No.:	
Quarter: ☐ NW ☐ NE ☐ SW ☐ SE	Section:	Township: N	Range: E

Permit Type & Fees (check all that apply)

☐ Erosion Control < 1 acre or 43,560 sq.ft. Disturbed Area (EC1)
☐ Erosion Control ≥ 1 acre or 43,560 sq.ft. Disturbed Area (EC2)
☐ Stormwater Management < 20,000 sq.ft. Impervious Area (SM1)
☐ Stormwater Management ≥ 20,000 sq.ft. Impervious Area (SM2)

Total Disturbed Area ……..... _____ sq.ft. x $0.0002 / sq.ft. (EC2) = $ _____

Disturbed Impervious Area ……. _____ sq.ft. x $0.0025 / sq.ft. (SM2) = $ _____

Base Fee: $200 (EC1), $250 (EC2), $200 (SM1), $500 (SM2) = $ _____

Total Application Fee = $ _____

Duration of Land Disturbance ……. _____ weeks x $25 / week (EC1, EC2) = $ _____

Start Date…… _____ Base Fee: $250 (EC2), $500 (SM2) = $ _____

End Date……. _____ **Total Inspection Fee** = $ _____

Certification & Permission

Certification: I hereby certify that I am the landowner of the property which is the subject of this Permit Application. I certify that the information contained in this form and attachments is true and accurate. I understand that failure to comply with any or all of the provisions of the ordinances and/or permit may result in notices, fines / forfeitures, stop work orders, permit revocation, and cease & desist orders.

Permission: As landowner of the property, I hereby give the permit authority permission to enter and inspect the property to evaluate this permit application, to determine compliance with the ordinances, and to perform corrective actions after issuing proper notice to the landowner.

Applicant Signature	Date Signed
Landowner Signature (required)	Date Signed

LEAVE BLANK – FOR MUNICIPAL USE ONLY

Date Application Received:	Fee Received $	Receipt No:
Construction Site ID / Permit No:	Date Issued:	Issued By:

CERTIFICATE OF PERMIT COVERAGE

FOR

EROSION CONTROL AND/OR STORMWATER MANAGEMENT PERMIT

Under Chapter(s) 2 and 9 of Title 15 of the Village of Combined Locks Cod of Ordinances, landowners of construction sites are required to post this certificate in a conspicuous place at the construction site. This certifies that the site has been granted Erosion Control and/or Stormwater Management Permit coverage by the Village of Combined Locks. The permit requires the landowner to implement and maintain erosion and/or sediment control practices to limit/reduce the amount of sediment being transported off-site and into streets, storm sewers, ditches, streams, rivers, lakes and wetlands.

EROSION CONTROL COMPLAINTS

Should be reported to the Village of Combined Locks Tip Line at

(920) 788-7740

Please provide the following information to the Tip Line:

Construction Site I.D. No.:
Site Name (Project):
Address/Location:

Additional Information:

Landowner Name:
Landowner's Contact Person:
Contact Telephone Number:
Permit Start Date:

Village of Combined Locks
405 Wallace Street
Combined Locks, WI 54113
Phone: 920.788.7740

INFORMATION SUBMITTED BY THE PUBLIC

Complaint Submitted By:		
Name:	☐ Anonymous	Date:
Address:		
Telephone:	E-Mail:	
Should we contact you? ☐ Yes ☐ No		
Location of Complaint:		
Site Name (Project):		Construction Site ID No:
Address / Location:		
Landowner Name:		

Description of Complaint: (check all that apply)

☐ Automobiles (fluid leak, car washing)	☐ Storm Water Management (flooding, pond maintenance)
☐ Pet Waste	☐ Illicit Discharge (spill / hazardous material)
☐ Household Hazardous Waste (dumping)	☐ Illicit Discharge (improper waste disposal)
☐ Household Practices (garbage, recycling)	☐ Illicit Discharge (dry weather flow / discharge)
☐ Fertilizers & Pesticides	☐ Illicit Discharge (illegal plumbing connection)
☐ Leaves & Grass Clippings	☐ Illicit Discharge (failing lateral / septic system)
☐ Stream & Shoreline Management (erosion)	☐ Street Sweeping / Catch Basin Cleaning
☐ Residential (downspouts, sump pump)	☐ Municipal Road Salt & Other Deicers
☐ Construction Site Erosion Control	☐ Other: _____

Describe complaint:

Description of Follow-Up Actions:

Describe follow-up actions:

Chapter 2. Construction Site Erosion Control

§ 15-2-1. Authority.

(a) **Statutory Authority.** This chapter is adopted under the authority granted by § 61.354, Wis. Stats. This chapter supersedes all provisions of an ordinance previously enacted under § 61.35, Wis. Stats., that relate to construction site erosion control. Except as otherwise specified in § 61.354 Wis. Stats., § 61.35, Wis. Stats., applies to this chapter and to any amendments to this chapter.

(b) **Other Regulations.** The provisions of this chapter are deemed not to limit any other lawful regulatory powers of the same governing body.

(c) **Administration.** The Village Board hereby designates the Director of Public Works to administer and enforce the provisions of this chapter.

(d) **Limitation on Pre-Emption.** The requirements of this chapter do not pre-empt more stringent erosion and sediment control requirements that may be imposed by any of the following:

(1) Wisconsin Department of Natural Resources administrative rules, permits or approvals including those authorized under §§ 281.16 and 283.33, Wis. Stats.

(2) Targeted performance standards promulgated in rules by the Wisconsin Department of Natural Resources under § NR 151.004, Wis. Adm. Code.

§ 15-2-2. Findings of fact.

The Combined Locks Village Board finds that runoff from land disturbing construction activity carries a significant amount of sediment and other pollutants to the waters of the state in the Village of Combined Locks.

§ 15-2-3. Purpose and intent.

It is the purpose of this chapter to further the maintenance of safe and healthful conditions; prevent and control water pollution; prevent and control soil erosion; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; preserve ground cover and scenic beauty; and promote sound economic growth, by minimizing the amount of sediment and other pollutants carried by runoff or discharged from land disturbing construction activity to waters of the state in the Village of Combined Locks.

§ 15-2-4. Applicability and jurisdiction.

(a) **Applicability.**

(1) Where not otherwise limited by law, this chapter applies to all construction sites, unless the site is otherwise exempt under § 15-2-4(a)(2) or (3):

a. A permit is required for a construction site with 4,000 square feet or greater of land disturbing construction activity. The responsible party shall comply with all applicable provisions of this chapter for a permitted site, including the § 15-2-7(b) performance standards, § 15-2-8 permit requirements, and § 15-2-9 plan requirements.

b. A permit is not required for a construction site with less than 4,000 square feet of land disturbing construction activity. The responsible party shall comply with all applicable provisions of this chapter for a non-permitted site, including the § 15-2-7(a) performance standards.

c. Notwithstanding the applicability requirements in § 15-2-4(a)(1)a. and b., a permit is required for a construction site with less than 4,000 square feet of land disturbing construction activity if the administering authority determines that permit coverage is needed in order to improve chapter compliance, meet targeted performance standards, or protect waters of the state. If a permit is required, the responsible party shall comply with all applicable provisions of this chapter for a permitted site, including the § 15-2-7(b) performance standards, § 15-2-8 permit requirements, and § 15-2-9 plan requirements.

d. Utility work and other disturbances of a continuous distance of 100 feet of road ditch, nonagricultural grass waterway or other nonagricultural land area where drainage occurs in a watercourse.

(2) This chapter does not apply to the following:

a. Nonpoint discharges from agricultural activity areas.

b. Nonpoint discharges from silviculture activities.

(3) A construction site exempted by federal statutes or regulations from the requirement to have a national pollutant discharge elimination system permit issued under 40 CFR 122, for land disturbing construction activity, shall comply with § 15-2-7(a) performance standards if less than one acre of land disturbing construction activity. The § 15-2-7(b) performance standards, § 15-2-8 permit requirements, and § 15-2-9 plan requirements are not applicable.

(b) **Jurisdiction.** This chapter applies to land disturbing construction activity on construction sites located within the boundaries and jurisdiction of the Village of Combined Locks.

(c) **Exclusions.** This chapter is not applicable to activities conducted by a state agency, as defined under § 227.01 (1), Wis. Stats., but also including the office of district attorney, which is subject to the state plan promulgated or a memorandum of understanding entered into under § 281.33 (2), Wis. Stats.

§ 15-2-5. Definitions.

(a) The following definitions shall be applicable in this chapter:

(1) **Administering Authority.** A governmental employee or their designees empowered under s. 61.354, Wis. Stats., to administer this chapter.
(2) **Agricultural Activity Area.** The part of the farm where there is planting, growing, cultivating and harvesting of crops for human or livestock consumption and pasturing or outside yarding of livestock, including sod farms and silviculture. Practices in this area may include waterways, drainage ditches, diversions, terraces, farm lanes, excavation, filling and similar practices. The agricultural activity area does not include the agricultural production area.
(3) **Agricultural Production Area.** The part of the farm where there is concentrated production activity or impervious surfaces. Agricultural production areas include buildings, driveways, parking areas, feed storage structures, manure storage structures, and other impervious

surfaces. The agricultural production area does not include the agricultural activity area.

(4) **Atlas 14.** The National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation-Frequency Atlas of the United States, Volume 8 (Midwestern States), published in 2013.

(5) **Best Management Practices or BMP.** Structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.

(6) **Business Day.** A day the office of the administering authority is routinely and customarily open for business.

(7) **Cease and Desist Order.** A court-issued order to halt land disturbing construction activity that is being conducted without the required permit.

(8) **Common Plan of Development or Sale.** A development or sale where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan. A common plan of development or sale includes, but is not limited to, subdivision plats, certified survey maps, and other developments.

(9) **Construction Site.** An area upon which one or more land disturbing construction activities occur, including areas that are part of a larger common plan of development.

(10) **Design Storm.** A hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency and total depth of rainfall. The TP-40, Type II, 24-hour design storms for Village of Combined Locks are: 1-year, 2.2 inches; 2-year, 2.5 inches; 5-year, 3.3 inches; 10-year, 3.8 inches; 25-year, 4.4 inches; 50-year, 4.9 inches; and 100-year, 5.3 inches. The Atlas 14, MSE4, 24-hour design storms for the Village of Combined Locks are: 1-year, 2.14 inches; 2-year, 2.45 inches; 5-year, 3.01 inches; 10-year, 3.51 inches; 25-year, 4.24 inches; 50-year, 4.85 inches; and 100-year, 5.50 inches.

(11) **Development.** Residential, commercial, industrial, institutional, or other land uses and associated roads.

(12) **Division of Land.** The creation from one or more parcels or building sites of additional parcels or building sites where such creation occurs at one time or through the successive partition within a 5 year period.

(13) **Erosion.** The process by which the land's surface is worn away by the action of wind, water, ice or gravity.

(14) **Erosion and Sediment Control Plan.** A comprehensive plan developed to address pollution caused by erosion and sedimentation of soil chapters or rock fragments during construction.

(15) **Extraterritorial.** The unincorporated area within 3 miles of the corporate limits of a first, second, or third class city, or within 1.5 miles of a fourth class city or village.

(16) **Final Stabilization.** Means that all land disturbing construction activities at the construction site have been completed and that a uniform perennial vegetative cover has been established, with a density of at least 70 percent of the cover, for the unpaved areas and areas not covered by permanent structures, or that employ equivalent permanent stabilization measures.

(17) **Governing Body.** Town board of supervisors, county board of supervisors, city council, village board of trustees or village council.

(18) **Land Disturbing Construction Activity or Disturbance.** Any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover, that may result in runoff and lead to an increase in soil erosion and movement of pollutants into the municipal separate storm sewer or waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities, and soil stockpiling.

(19) **Maximum Extent Practicable or MEP.** The highest level of performance that is achievable but is not equivalent to a performance standard identified within this chapter. Maximum extent practicable applies when the permit applicant demonstrates to the administering authority's satisfaction that a performance standard is not achievable and that a lower level of performance is appropriate. In making the assertion that a performance standard is not achievable and that

a level of performance different from the performance standard is the maximum extent practicable, the permit applicant shall take into account the best available technology, cost effectiveness, geographic features, and other competing interests such as protection of public safety and welfare, protection of endangered and threatened resources, and preservation of historic properties.

(20) **MSE4 Distribution.** A specific precipitation distribution developed by the USDA, NRCS, using precipitation data from Atlas 14.

(21) **Performance Standard.** A narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.

(22) **Permit.** A written authorization made by the administering authority to the applicant to conduct land disturbing construction activity or to discharge post-construction runoff to waters of the state.

(23) **Pollutant.** Has the meaning given in § 283.01 (13), Wis. Stats.

(24) **Pollution.** Has the meaning given in § 281.01 (10), Wis. Stats.

(25) **Protective Area.** Has the meaning given in Stormwater Management ordinance.

(26) **Responsible Party.** Any entity holding fee title to the property or performing services to meet the performance standards of this chapter through a contract or other agreement.

(27) **Runoff.** Stormwater or precipitation including rain, snow or ice melt or similar water that moves on the land surface via sheet or channelized flow.

(28) **Sediment.** Settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.

(29) **Separate Storm Sewer.** A conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:

a. Is designed or used for collecting water or conveying runoff.
b. Is not part of a combined sewer system.
c. Is not part of a publicly owned wastewater treatment works that provides secondary or more stringent treatment.
d. Discharges directly or indirectly to waters of the state.

(30) **Silviculture Activities.** Activities including tree nursery operations, tree harvesting operations, reforestation, tree thinning, prescribed burning, and pest and fire control. Clearing and grubbing of an area of a construction site is not a silviculture activity.

(31) **Site.** The entire area included in the legal description of the land on which the land disturbing construction activity is proposed in the permit application.

(32) **Stop Work Order.** An order issued by the administering authority which requires that all construction activity on the site be stopped.

(33) **Targeted Performance Standard.** A performance standard that will apply in a specific area, where additional practices beyond those contained in this chapter, are necessary to meet water quality standards. A total maximum daily load is an example of a targeted performance standard.

(34) **Technical Standard.** A document that specifies design, predicted performance and operation and maintenance specifications for a BMP, material, device or method.

(35) **Total Maximum Daily Load or TMDL.** The amount of pollutants specified as a function of one or more water quality parameters, that can be discharged per day into a water quality limited segment and still ensure attainment of the applicable water quality standard.

(36) **TP-40.** The Technical Paper No. 40, Rainfall Frequency Atlas of the United States, published in 1961.

(37) **TR-55**. The United States department of agriculture, natural resource conservation service (previously soil conservation service), Urban Hydrology for Small Watersheds, Second Edition,

Technical Release 55, June 1986, which is incorporated by reference for this chapter.

(38) **Type II Distribution.** A rainfall type curve as established in the "United States Department of Agriculture, Soil Conservation Service, Technical Paper 149, published 1973", which is incorporated by reference for this chapter. The Type II curve is applicable to all of Wisconsin and represents the most intense storm pattern.

(39) **Waters of the State.** Has the meaning given in § 283.01 (20), Wis. Stats.

§ 15-2-6. Technical standards.

(a) **Design criteria, standards and specifications.** All BMPs required to comply with this chapter shall meet the design criteria, standards and specifications based on any of the following:

(1) Design guidance and technical standards identified or developed by the Wisconsin Department of Natural Resources under Subchapter V of Chapter NR 151, Wis. Adm. Code.

(2) Technical standards and other guidance identified within the Village of Combined Locks Erosion and Sediment Control Reference Guide.

(3) Soil loss prediction tools such as the Revised Universal Soil Loss Equation 2 (RUSLE2) that estimate the sediment load leaving the site under varying land and management conditions may be used to show compliance with the sediment performance standards contained in § 15-2-7(b)

(4) For this chapter, average annual basis is calculated using the appropriate annual rainfall or runoff factor, also referred to as the R factor, or an equivalent design storm using a Type II distribution, with consideration given to the geographic location of the site and the period of disturbance.

(b) **Other standards.** Other technical standards not identified in § 15-2-6 may be used provided that the methods have been approved by the administering authority.

§ 15-2-7. Performance standards.

(a) **Non-permitted sites.**

(1) Responsible party. The landowner of the construction site or other person contracted or obligated by other agreement with the landowner to implement and maintain construction site BMPs is a responsible party and shall comply with this chapter.

(2) Requirements. At each site where land disturbing construction activity is to occur, BMPs shall be used to prevent or reduce all of the following:

a. The deposition of soil from being tracked onto streets by vehicles.

b. The discharge of sediment from disturbed areas into stormwater inlets.

c. The discharge of sediment from disturbed areas into adjacent waters of the state.

d. The discharge of sediment from drainage ways that flow off the site.

e. The discharge of sediment by dewatering activities.

f. The discharge of sediment eroding from soil stockpiles existing for more than 7 days.

g. The discharge of onsite chemicals, cement and other building compounds and materials into waters of the state or offsite separate storm sewers during the construction period. However, projects that require the placement of these materials in waters of the state, such as constructing bridge footings or BMP installations, are not prohibited by this chapter.

(3) Location. BMPs shall be located so that treatment occurs before runoff enters waters of the state and offsite separate storm sewers. However, projects that require BMP placement in waters of the state, such as a turbidity barrier, are not prohibited by this chapter.

(4) Implementation. The BMPs used to comply with this section shall be implemented as follows:

a. Erosion and sediment control practices shall be constructed or installed before land disturbing construction activities begin.

b. Erosion and sediment control practices shall be maintained until final stabilization.

c. Final stabilization activity shall commence when land disturbing activities cease and final grade has been reached on any portion of the site.

d. Temporary stabilization activity shall commence when land disturbing activities have temporarily ceased and will not resume for a period exceeding 14 calendar days.

e. BMPs that are no longer necessary for erosion and sediment control shall be removed by the responsible party.

(5) Alternate requirements. The administering authority may establish erosion and sediment control requirements more stringent than those set forth in this chapter if the administering authority determines that an added level of protection is needed to protect resources.

(b) **Permitted sites.**

(1) Responsible party. The landowner or other person performing services to meet the performance standards of this chapter, through a contract or other agreement with the landowner, is a responsible party and shall comply with this chapter.

(2) Plan. A written erosion and sediment control plan shall be developed and implemented by the responsible party in accordance with § 15-2-9. The erosion and sediment control plan shall meet all of the applicable requirements contained in this chapter.

(3) Requirements. The erosion and sediment control plan shall meet all of the following:

a. The plan shall use BMPs to prevent or reduce all of the following:

1. The deposition of soil from being tracked onto streets by vehicles.

2. The discharge of sediment from disturbed areas into stormwater inlets.

3. The discharge of sediment from disturbed areas into adjacent waters of the state.

4. The discharge of sediment from drainage ways that flow off the site.

5. The discharge of sediment by dewatering activities.

6. The discharge of sediment eroding from soil stockpiles existing for more than 7 days.

7. The discharge of sediment from erosive flows at outlets and in downstream channels.

8. The discharge of onsite chemicals, cement and other building compounds and materials into waters of the state or offsite separate storm sewers during the construction period. However, projects that require the placement of these materials in waters of the state, such as constructing bridge footings or BMP installations, are not prohibited by this chapter.

9. The discharge of untreated wash water from vehicle and wheel washing into waters of the state or offsite separate storm sewers.

b. For sites with one acre or more of land disturbing construction activity, the plan shall meet the following sediment performance standards:

1. BMP's that, by design, discharge no more than 5 tons per acre per year, or to the maximum extent practicable, of the sediment load carried in runoff from initial grading to final stabilization.

2. Except as provided in § 15-2-7(b)(6), the administering authority may not require any person to employ more BMPs than are needed to meet the 5 tons per acre per year sediment performance standard in order to comply with maximum extent practicable. Erosion and sediment control BMPs may be combined to meet the sediment performance standard. The administering authority may give credit toward meeting the sediment performance standard for limiting the duration or area, or both, of land disturbing construction activity, or for other appropriate mechanisms.

3. Notwithstanding § 15-2-7(b)(3)b.1. and 2., if BMPs cannot be designed and implemented to meet the 5 tons per acre per year sediment performance standard, the plan shall include a written, site-specific explanation of why the sediment performance standard cannot be met and how the sediment load will be reduced to the maximum extent practicable.

c. The plan shall incorporate all of the following preventative measures:

1. Maintenance of existing vegetation, especially adjacent to surface waters whenever possible.

2. Minimization of soil compaction and preservation of topsoil.

3. Minimization of land disturbing construction activity on slopes of 20% or more.

4. Development of spill prevention and response procedures.

(4) Location. BMPs shall be located so that treatment occurs before runoff enters waters of the state and offsite separate storm sewers. However, projects that require BMP placement in waters of the state, such as a turbidity barrier, are not prohibited by this chapter.

(5) Implementation. The BMPs used to comply with this chapter shall be implemented as follows:

a. In accordance with the plan developed pursuant to § 15-2-9, the erosion and sediment control practices shall be constructed or installed before land disturbing construction activities begin.

b. Erosion and sediment control practices shall be maintained until final stabilization.

c. Final stabilization activity shall commence when land disturbing activities cease and final grade has been reached on any portion of the site.

d. Temporary stabilization activity shall commence when land disturbing activities have temporarily ceased and will not resume for a period exceeding 14 calendar days.

e. BMPs that are no longer necessary for erosion and sediment control shall be removed by the responsible party.

(6) Targeted performance standards. The administering authority may establish numeric water quality requirements that are more stringent than those set forth in § 15-2-7(b)(3) in order to meet targeted performance standards, total maximum daily loads, and/or water quality standards for a specific water body or area. The numeric water quality requirements may be applicable to any permitted site, regardless of the size of land disturbing construction activity.

(7) Alternate requirements. The administering authority may establish erosion and sediment control requirements more stringent than those set forth in this section if the administering authority determines that an added level of protection is needed to protect resources. Also, the administering authority may establish erosion and sediment control requirements less stringent than those set forth in this section if the administering authority determines that less protection is needed to protect resources. However, the alternative requirements shall not be less stringent than those requirements promulgated in rules by Wisconsin Department of Natural Resources under NR 151 Wisconsin Administrative Code.

§ 15-2-8. Permitting required; procedures.

(a) **Permit required.** When a permit is required, no responsible party may commence a land disturbing construction activity subject to this chapter without receiving prior approval of an erosion and sediment control plan for the site and a permit from the administering authority.

(b) **Permit application and fees.** When a permit is required, at least one responsible party desiring to undertake a land disturbing construction activity subject to this chapter shall submit an application for a permit and an erosion and sediment control plan that meets the requirements of § 15-2-9 and shall pay an application fee according to the fee schedule to the Village of Combined Locks. By submitting an application, the applicant is authorizing the administering authority to enter the site to obtain information required for the review of the erosion and sediment control plan.

(c) **Review and approval of permit application.** The administering authority shall review any permit application that is submitted with an erosion and sediment control plan, and the required fee. The following approval procedure shall be used:

(1) Within 20 business days of the receipt of a complete permit application, as required by § 15-2-8(b), the administering authority shall inform the applicant whether the application and plan are approved or disapproved based on the requirements of this chapter.

(2) If the permit application and plan are approved, the administering authority shall issue the permit.

(3) If the permit application or plan is disapproved, the administering authority shall state in writing the reasons for disapproval.

(4) The administering authority may request additional information from the applicant. If additional information is submitted, the administering authority shall have 20 business days from the date the additional information is received to inform the applicant that the plan is either approved or disapproved.

(5) Failure by the administering authority to inform the permit applicant of a decision within 20 business days of a required submittal shall be deemed to mean approval of the submittal and the applicant may proceed as if a permit had been issued.

(d) **Financial guarantee.** As a condition of approval and issuance of the permit, the administering authority may require the applicant to deposit a surety bond, cash escrow, or irrevocable letter of credit to guarantee a good faith execution of the approved erosion and sediment control plan and any permit conditions. The financial guarantee shall be in an amount determined by the administering authority for the estimated construction and maintenance of the practices called for in the erosion and sediment control plan. The administering authority may require the site to be certified by a professional engineer. The financial guarantee shall give the administering authority the funds to complete the erosion and sediment control practices if the landowner defaults or does not properly implement the approved erosion and sediment control plan. Improper implementation of the plan shall be upon written notice by the administering authority that the requirements of this chapter have not been met.

(1) The administering authority shall release the portion of the financial guarantee established under this section, less any costs incurred by the administering authority to complete installation of practices, upon submission of “as built plans” by a licensed professional engineer. The administering authority may make provisions for a partial prorate release of the financial guarantee based on the completion of various development stages.

(e) **Permit requirements.** All permits issued under this chapter shall be subject to the following conditions, and holders of permits issued under this chapter shall be deemed to have accepted these conditions. The administering authority may suspend or revoke a permit for violation of a permit condition, following written notification of the responsible party. An action by the administering authority to suspend or revoke this permit may be appealed in accordance with § 15-2-13.

(1) Notify the administering authority within 48 hours of commencing any land disturbing construction activity.

(2) Obtain permission in writing from the administering authority prior to any modification pursuant to § 15-2-9(b) of the erosion and sediment control plan.

(3) Install all BMPs as identified in the approved erosion and sediment control plan.

(4) Maintain all road drainage systems, stormwater drainage systems, BMPs and other facilities identified in the erosion and sediment control plan.

(5) Repair any siltation or erosion damage to adjoining surfaces and drainage ways resulting from land disturbing construction activities and document repairs in weekly inspection reports.

(6) Conduct construction site inspections at least once per week and within 24 hours after a precipitation event of 0.5 inches or greater. Repair or replace erosion and sediment control BMPs as necessary within 24 hours of an inspection or notification that repair or replacement is needed. Maintain, at the construction site, weekly written reports of all inspections. Weekly inspection reports shall include all of the following: date, time and location of the construction site inspection; the name of individual who performed the inspection; an assessment of the condition of erosion and sediment controls; a description of any erosion and sediment control BMP implementation and maintenance performed; and a description of the present phase of land disturbing construction activity at the construction site.

(7) Allow the administering authority to enter the site for the purpose of inspecting compliance with the erosion and sediment control plan or for performing any work necessary to bring the site into compliance with the control plan. Keep a copy of the erosion and sediment control plan, stormwater management plan, amendments, weekly inspection reports, and permit at the construction site until permit coverage is terminated.

(8) The permit applicant shall post the "Certificate of Permit Coverage" in a conspicuous location at the construction site.

(g) **Permit conditions.** Permits issued under this section may include conditions established by administering authority in addition to the requirements set forth in § 15-2-8(e), where needed to assure compliance with the performance standards in § 15-2-7.

(g) **Permit duration.** Permits issued under this section shall be valid for a period of 180 days, or the length of the building permit or other construction authorizations, whichever is longer, from the date of issuance. The administering authority may extend the period one or more times for up to an additional 180 days. The administering authority may require additional BMPs as a condition of the extension if they are necessary to meet the requirements of this chapter.

(h) **Maintenance.** The responsible party throughout the duration of the construction activities shall maintain all BMPs necessary to meet the requirements of this chapter until the site has undergone final stabilization.

(i) **Alternate requirements.** The administering authority may prescribe requirements less stringent for applicants seeking a permit for a construction site with less than one acre of land disturbing construction activity.

§ 15-2-9. Erosion and sediment control plan.

(a) **Plan requirements.** The erosion and sediment control plan required under § 15-2-7(b) shall comply with the Village of Combined Locks Erosion and Sediment Control Reference Guide and contain at a minimum the following information:

(1) Name, address, and telephone number of the landowner and responsible parties.

(2) A legal description of the property proposed to be developed.

(3) A site map with property lines, disturbed limits, and drainage patterns.

(4) Total area of the site and total area of the construction site that is expected to be disturbed by construction activities.

(5) Performance standards applicable to site.

(6) Proposed best management practices.

(7) Erosion and sediment control plan narrative.

(8) Construction sequence and construction schedule.

(9) The erosion and sediment control plan shall include, at a minimum, the items specified in the Village of Combined Locks Erosion and Sediment Control Reference Guide and RUSLE2.

(b) **Amendments.** The applicant shall amend the plan if any of the following occur:

(1) There is a change in design, construction, operation, maintenance or schedule at the site which has the reasonable potential for the discharge of pollutants to waters of the state or separate storm sewers, and which has not otherwise been addressed in the plan.

(2) The actions required by the plan fail to reduce the impacts of pollutants carried by construction site runoff.

(3) The administering authority notifies the applicant of changes needed in the plan.

(c) **Alternate requirements.** The administering authority may prescribe requirements less stringent for applicants seeking a permit for a construction site with less than one acre of disturbance.

§ 15-2-10. Fee schedule.

The fees referred to in other sections of this chapter shall be established by the Village of Combined Locks Board and may from time to time be modified by resolution. A schedule of the fees established by the Village Board shall be available for review in the Village Hall.

§ 15-2-11. Inspection.

Whenever land disturbing construction activities are being carried out, the administering authority may enter the land pursuant to the provisions of §§ 66.0119(1), (2), and (3), Wis. Stats.

§ 15-2-12. Enforcement.

(a) The administering authority may post a stop-work order if any of the following occurs:

(1) Any land disturbing construction activity is being undertaken without a permit and, pursuant to § 15-2-4(a) of this chapter, a permit is required for the construction site.

(2) The erosion and sediment control plan is not being implemented in a good faith manner.

(3) The conditions of the permit are not being met.

(4) Any land disturbing construction activity is in violation of the chapter.

(b) If the responsible party does not cease activity as required in a stop-work order posted under this section or fails to comply with the erosion and sediment control plan or permit conditions, the administering authority may revoke the permit.

(c) If the responsible party, where no permit has been issued, does not cease the activity after being notified by the administering authority, or if a responsible party violates a stop-work order posted under § 15-2-12(a), the administering authority may request the village attorney to obtain a cease and desist order in any court with jurisdiction.

(d) The administering authority may retract the stop-work order issued under § 15-2-12(a) or the permit revocation under § 15-2-12(b)

(e) After posting a stop-work order under § 15-2-12(a), the administering authority may issue a notice of intent to the responsible party of its intent to perform work necessary to comply with this chapter. The administering authority may go on the land and commence the work after issuing the notice of intent. The costs of the work performed under this chapter by the administering authority, plus interest at the rate authorized by Village Board shall be billed to the responsible party or recovered from the surety bond, cash escrow, or irrevocable letter of credit. In the event a responsible party fails to pay the amount due, the clerk shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to Subch. VII of Ch. 66, Wis. Stats.

(f) Any person, firm, association, or corporation who or which does not comply with the provisions of this chapter shall be subject to a forfeiture as provided in the Uniform Forfeiture and Bond Schedules per offense, together with the costs of prosecution. Each day that the violation exists shall constitute a separate offense.

(g) Compliance with the provisions of this chapter may also be enforced by injunction in any court with jurisdiction. It shall not be necessary to prosecute for forfeiture or a cease and desist order before resorting to injunctional proceedings.

§ 15-2-13. Appeals.

(a) **Board of Appeals.** The Board of Appeals created pursuant to § 2-4-2 of this Code, pursuant to § 61.354(4)(b), Wis. Stats.:

(1) Shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the administering authority in administering this chapter except for cease and desist orders obtained under § 15-2-12(c)

(2) Upon appeal, may authorize variances from the provisions of this chapter which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of the chapter will result in unnecessary hardship; and

(3) Shall use the rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances.

(b) **Who may appeal.** Appeals to the Board of Appeals may be taken by any aggrieved person or by an officer, department, board or bureau of the Village of Combined Locks affected by any decision of the administering authority.

§ 15-2-14. Severability.

If any section, clause, provision or portion of this chapter is judged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the chapter shall remain in force and not be affected by such judgement.

§ 15-2-15. Effective Date.

This chapter shall in force and effect from and after its adoption and posting.

§ 15-2-16. Limitations on municipal responsibility.

Nothing in this chapter creates or imposes, nor shall be construed to create or impose, any greater obligation or responsibility on the municipality which has adopted this chapter than those minimum requirements specifically required by State of Wisconsin Statutes and Department of Natural Resources regulations.